Petition and Transcript of Record

Supreme Court of the United States

OCTOBER TERM, 1931

No. 6

DE LAVAL STEAM TURBINE COMPANY,
PETITIONER,

vs.

THE UNITED STATES

ON WRIT OF CERTIORARI TO THE COURT OF CLAIMS

PETITION FOR CERTIORARI FILED JANUARY 29, 1931

CERTIORARI GRANTED APRIL 20, 1931

(35,607)

(35,607)

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1930

No. 685

DE LAVAL STEAM TURBINE COMPANY, PETITIONER,

vs.

THE UNITED STATES

ON PETITION FOR WRIT OF CERTIORARI TO THE COURT OF CLAIMS

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[fol. 1]

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1930

No. 685

DE LAVAL STEAM TURBINE COMPANY

v.

THE UNITED STATES

PETITION FOR WRIT OF CERTIORARI TO THE COURT OF CLAIMS

To the Chief Justice and Associate Justices of the Supreme Court of the United States:

The De Laval Steam Turbine Company, prays that a writ of certiorari issue to review the judgment of the Court of Claims of the United States in the above entitled action and respectfully shows to this Honorable Court:

Statement of the Case

Suit was instituted in the Court of Claims by the petitioner, a New Jersey corporation engaged in the business, among other things, of manufacturing marine steam turbines and kindred equipment, to recover $583,396.65 plus interest, as just compensation for (1) three contracts made by it with private parties, which were requisitioned by defendant, (2) cancellation of defendant's purchase order, No. P. D. 1779, dated April 20, 1918, for spare parts, and (3) for extra costs and expenses incurred by petitioner in storing and handling materials after suspension and for extra work caused by suspension.

The three private contracts are briefly described as:

(a) Supple & Ballin contract made May 18, 1917, for construction by petitioner of four marine turbine sets in- [fol. 2] cluding furnishing materials therefor at contract price of $150,000.

(b) Turbine Equipment-Luckenbach contract made March 15, 1917, for construction by petitioner of four

marine turbine sets including furnishing materials therefor at contract price of $216,000, as supplemented by orders of Turbine Equipment Company made, respectively, April 16, 1917, and May 5, 1917, and accepted by petitioner for certain spare parts for said four turbine sets, at agreed price of $12,530.

(c) Standifer contract made December 31, 1917, for construction by petitioner of ten marine turbine sets including furnishing materials therefor at contract price of $735,000.

These private contracts were all firm and none of the parties thereto had the right to modify or cancel them.

Early in 1918, petitioner was performing these contracts when defendant, acting through the United States Shipping Board Emergency Fleet Corporation, pursuant to the Act of Congress approved June 15, 1917 known as the "Emergency Shipping Fund Act" (40 Stat. 182) and the executive order of the President of the United States, dated July 11, 1917, requisitioned the contracts and materials therefor and directed petitioner to perform its obligations thereunder for the benefit of the United States.

After the requisitions, petitioner continued the performance of its obligations under said contracts as directed by defendant for its benefit for about one year, when defendant on account of the general curtailment of the Fleet Corporation's program of ship construction subsequent to the signing of the Armistice on various dates from January 2, [fol. 3] 1919 to April 14, 1919, ordered petitioner to stop work on all turbine equipment and spare parts covered by these contracts, except one set of turbine equipment specified in the Standifer contract and one set of spare parts therefor called for by said Government purchase order No. P. D. 1779. Petitioner stopped the work as directed and subsequently completed and delivered to defendant the one set Standifer turbine equipment and the spare parts therefor.

Thereafter, petitioner presented its claim for just compensation to the Emergency Fleet Corporation, and that corporation on May 19, 1920 awarded petitioner $88,723.63 as just compensation. Petitioner refused to accept such award, and pursuant to said Act of June 15, 1917 elected to take 75% of the award and to sue defendant for such

further sum as added to said 75% would make up just compensation. Thereafter, petitioner instituted this suit.

On April 30, 1930, the Court of Claims filed special findings of fact and conclusions of law in which it held that "there was in fact no property taken;" that "the contracts of the *purchasers* were requisitioned, and the defendant put itself in the place of the parties who made the contracts with plaintiff;" that "plaintiff's right to recover in the case must be determined under the Act of June 15, 1917, providing that the Government had the right to cancel all or any part of such contracts as are involved herein, and its right to recover must be limited by the rule laid down in Russell Motor Car Co. v. U. S., 261 U. S. 514"; and that petitioner was entitled to recover the sum of $84,074.34 (the unpaid balance of that which the Court of Claims found petitioner's costs and expenses to be after deducting therefrom payments made by the original pur-
[fol. 4] chasers and defendant, plus interest on said unpaid balances to August 17, 1920) with interest from August 17, 1920 until paid, and also $8,500 (denominated by the Court of Claims as "cancellation allowance") with interest from March 17, 1919 until paid.

Petitioner moved for a new trial and on November 3, 1930, the Court denied the motion and filed a supplemental opinion adhering to its original opinion, but slightly modifying two of its special findings.

Ultimate Questions

This case arises out of the exertion of the power of requisition conferred on the President by the Act of June 15, 1917, known as the "Emergency Shipping Fund Act" (40 Stat. 182). The ultimate questions involved are whether the requisitions under said Act of the three private contracts before referred to took from petitioner its property; and if so, upon what basis is just compensation to be ascertained. In Brooks-Scanlon Corporation v. United States (265 U. S. 106) the taking of the rights of the *purchaser* was involved; whereas in this case the taking of the contract rights of the *manufacturer* is in question.

[fol. 5] Reasons for Granting the Writ and Specification of Errors

The Writ prayed for should be allowed for the following reasons:

(1) The Court of Claims erred in deciding that the requisitions of the three private contracts took no property from petitioner. The Court found that defendant had requisitioned the contracts and turbines, and in its original opinion, conceded that petitioner was "entitled to just compensation for the acts of the Government", but said "there was in fact no property taken—instead, the contracts were cancelled". In its supplemental opinion, the Court held "the contracts of the *purchasers* were requisitioned and the defendant put itself in the place of the parties who made the contracts with the plaintiff". It is evident the holding that the requisitions took no property from petitioner is erroneous, for the requisitions of the contracts of the purchasers necessarily relieved the purchasers of their obligations under the contracts and hence must have taken from the petitioner its corresponding or correlative rights founded on those obligations.

(2) The Court of Claims erred in holding as to the three private contracts that petitioner's right to recover must be based on cancellation. In this, the Court completely ignores the fact that these three contracts were first requisitioned, and afterwards cancelled—about a year later—during which year petitioner was required to continue performance of its obligations thereunder for the benefit of defendant.

(3) The Court of Claims having erred in holding that petitioner's right to recover must be based on cancellation rather than requisition, commits the further error of ap-
[fol. 6] plying the rule for determining compensation as laid down in the Russell Motor Car Co. case to all four contracts, utterly disregarding the fact that three of the contracts were private contracts and but one of them a Government contract made after the enactment of the Act, as in the Russell case. This application of the rule of the Russell case to the three private contracts has the effect

of depriving petitioner of the rights guaranteed to it by the Fifth Amendment of the Constitution.

(4) The Court of Claims erred in holding that the compensation to which petitioner is entitled with respect to the three private contracts should not include or make any allowance for the profits petitioner would have made by performance. The Court concedes that if petitioner had been permitted to complete the contracts, substantial profits would have been realized. As found by the Court, the profits petitioner would have made by performance of the three private contracts amount to $370,663.81.

(5) That the decision of the Court of Claims is based upon an erroneous interpretation and application of the decisions of this Court in Russell Motor Car Co. v. United States, 261 U. S. 514, and Brooks-Scanlon Corporation v. United States, 265 U. S. 106.

(6) That the Court of Claims decided the questions involved in this case in a way probably not in accord with, or which does not give proper effect to, applicable decisions of this Court, including Brooks-Scanlon Corporation v. United States, 265 U. S. 106; A. W. Duckett & Co. v. United States, 266 U. S. 149; Campbell v. United States, 266 U. S. 368; Phelps v. United States, 274 U. S. 341; [fol. 7] Ingram-Day Co. v. McLouth, 275 U. S. 471, and International Paper Co. v. United States (decided January 19, 1931 and not yet reported).

(7) That the Court of Claims has decided a question of general importance and of substance relating to the construction of the Act of June 15, 1917, known as the "Emergency Shipping Fund Act" (40 Stat. 182), and the Fifth Amendment of the Constitution, which has not been, but should be, settled by this Court.

(8) That the Court of Claims so construes and applies the applicable provisions of the Act of June 15, 1917, as to thwart the purpose of the Fifth Amendment of the Constitution.

[fols. 8 & 9] Wherefore your petitioner respectively prays that a writ of certiorari be issued out of and under the seal of this Honorable Court, directed to the Court of Claims of the United States, commanding that Court to certify and

to send to this Court for its review and determination, on a date certain to be therein named, a full and complete transcript of the record and all proceedings in the case, numbered and entitled on its docket, No. A-82, De Laval Steam Turbine Company v. The United States, and that the said judgment of the Court of Claims of the United States may be reversed by this Honorable Court, and that your petitioner may have such other and further relief in the premises as to this Honorable Court may seem meet and just; and your petitioner will ever pray.

De Laval Steam Turbine Company, By George C. Holton, John S. Flannery, Hibbs Building, Washington, D. C., Counsel for Petitioner.

[fol. 1] IN COURT OF CLAIMS OF THE UNITED STATES

No. A-82

DE LAVAL STEAM TURBINE COMPANY

v.

THE UNITED STATES

I. HISTORY OF PROCEEDINGS

On April 12, 1921 the plaintiff filed its original petition, by Jesse C. Adkins, Esq.

On June 13, 1921, the defendant filed a general traverse to said petition.

On February 24, 1925, by leave of court, the plaintiff filed its amended petition and exhibits.

Said petition and exhibits are as follows:

II. AMENDED PETITION—Filed February 24, 1925

To the Honorable Chief Justice and Associate Judges of the Court of Claims:

The claimant, De Laval Steam Turbine Company, respectfully represents:

First Cause of Action

1. The claimant, De Laval Steam Turbine Company, is and at all times hereinafter mentioned was a corpora-

tion duly organized and existing under the laws of the State of New Jersey, having its principal office and factory at Trenton, New Jersey, and engaged in the business, among other things, of manufacturing marine steam turbines and spare parts therefor.

2. On or about May 18, 1917, claimant entered into a contract with a Supple & Ballin, an unlimited partnership of Portland, Oregon, under which claimant agreed to furnish to said Supple & Ballin certain turbine equipment for ships consisting of four De Laval 1500 BHP marine turbines and gear reductions therefor described in said contract and accompanying specifications, and [fol. 2] whereby said Supple & Ballin agreed to pay claimant therefor $150,000. in certain installments. Copy of said contract is made part hereof marked Exhibit A-1. Said contract will be referred to as the Supple & Ballin contract.

3. Thereafter and on and prior to receipt by claimant on or about January 12, 1918 of the requisition order hereinafter mentioned, claimant was engaged in the performance of its obligations under said Supple & Ballin contract, which contract was in full force and effect; claimant had provided itself with materials, equipment and labor to perform said contract, had partly performed the same and was in all respects ready, able and willing to complete such performance, and by so doing would have made large profits. Claimant had received from said Supple & Ballin the sum of $15,000. on account of the purchase price of said turbine equipment.

4. The Act of Congress approved June 15, 1917, known as the Urgent Deficiency Appropriation Act (40 Stat., 182), in a certain section thereof entitled "Emergency Shipping Fund," authorized the President of the United States, among other things, to requisition any existing contract for the building, production, or purchase of ships or material, and to place orders with any person for such ships or material as the necessities of the Government might require, and to make just compensation therefor. In said Act the word "material" is defined to include equipment for ships and everything required for or in connection with the production thereof.

In and by the Executive Order of July 11, 1917, the President of the United States acting by virtue of the

authority vested in him by said Act of Congress, directed that the United States Shipping Board Emergency Fleet Corporation (hereinafter called the Fleet Corporation)

"shall have and exercise all power and authority vested in me in said section of said act, in so far as applicable to and in furtherance of the construction of vessels, the pur- [fol. 3] chase or requisitioning of vessels in process of construction, whether on the ways or already launched, or of contracts for the construction of such vessels, and the completion thereof, and all power and authority applicable to and in furtherance of the production, purchase, and requisitioning of materials for ship construction."

In all its acts herein set forth, the Fleet Corporation acted for and on behalf of the United States, under and by virtue of the authority conferred upon it by said Act of Congress and said Executive Order.

5. On or about January 12, 1918, the Fleet Corporation under and by virtue of the Act of Congress and Executive Order aforesaid made and delivered to claimant a requisition order, copy of which is made part hereof marked Exhibit A-2. By said requisition order, said Fleet Corporation appropriated the rights and benefits of Supple & Ballin under said Supple & Ballin contract and assumed the unfulfilled obligations of Supple & Ballin under said contract and appropriated claimant's property including its rights against Supple & Ballin under said contract and the materials, appurtenances and devices pertaining thereto. Said Supple & Ballin contract requisitioned as aforesaid was given the number 5013 by the Fleet Corporation, and was thereafter commonly referred to as contract No. 5013.

6. In response to said requisition order, Exhibit A-2, claimant on January 18, 1918, by letter of that date, a copy of which marked Exhibit A-3 is made a part hereof, forwarded to the Fleet Corporation copies of said Supple & Ballin contract, the drawings and other data thereunder. On January 23, 1918, the Fleet Corporation, by letter of that date, notified claimant that it assumed responsibility, among others, of said Supple & Ballin contract and would make payments thereon direct to claimant, and also directed claimant to the Fleet Corporation payments as they became

due under the said contracts showing on the face of the [fol. 4] vouchers the particular contract to which the payment applied. Copy of said letter marked Exhibit A-4 is made a part hereof.

7. From and after January 12, 1918, the Fleet Corporation asserted that it had succeeded to the rights and obligations of Supple & Ballin under said Supple & Ballin contract, including the right to credit for said partial payment of $15,000. The Fleet Corporation kept said contract alive for its benefit, took credit for said payment of $15,000 on account and assumed the right to require and did require performance thereof by claimant for its benefit, except as hereinafter set forth; and, as required by the Fleet Corporation, claimant from and after the 12th day of January, 1918, did continue to perform for the benefit of the United States all of its obligations under said Supple & Ballin contract.

8. On or about January 2, 1919, the Fleet Corporation directed claimant to suspend all work on said Supple & Ballin contract, to make no additional commitments or expenditures and to perform no additional work in connection therewith. Upon receipt of such direction, claimant did suspend its performance of said contract, and notwithstanding that claimant was in all respects ready, able and willing to complete its performance of the same, the Fleet Corporation informed claimant that it would not further perform said contract, that it had the right to cancel and had cancelled the same, and it did not perform said contract. That prior and up to the time said suspension order was made as aforesaid, claimant had expended large sums of money and incurred obligations in obtaining said contract and in and about performance of said contract, which obligations and expenditures amounted to $45,918.73; that at the time of said suspension order, claimant had duly performed all obligations theretofore required to be performed by it under said contract and was in all respects ready, able and willing to complete performance of said contract according to its terms and could have completed said performance at a further cost of $66,122.11 and would have made a profit thereby of $37,959.16.

[fol. 5] 9. The materials acquired by claimant for performance of said Supple & Ballin contract were large and

cumbersome, and at the time of said suspension were in various parts of claimant's factory and occupied a large area of floor space which was of the highest value to claimant for manufacturing purposes; some of them were in the main machine shop and main casting yard of claimant, and were of great weight and volume and could be moved only with cranes, and some required to be protected from the elements. Claimant had no other place where they could be stored. Defendant failed, refused and neglected, until on or about the 14th day of January, 1920, to release said materials from the effect of said requisition order or to allow claimant to dispose of same or to make any provision for the removal, care, storage or disposition of the same, and therefore claimant was compelled to and did care for, handle, move about and store said materials, and was thereby put to large expense. The expenses and costs necessarily incurred by claimant in so caring for, handling and storing said materials and the reasonable value of claimant's space occupied by said materials during said period amounted to $6,750 and in addition thereto, claimant's other manufacturing operations were greatly impeded and the cost thereof greatly increased.

10. The sudden suspension of work on said Supple & Ballin contract caused large additional costs to claimant for additional clerical hire, additional manufacturing costs and interference with the efficiency of its plant, which costs amounted to $14,000.

11. By reason of the foregoing, claimant became entitled to recover just compensation from the defendant. The Fleet Corporation proceeding under the provisions of said Act of June 15, 1917 and the Executive Order of the President aforesaid, on May 19, 1920, determined the amount of claimant's just compensation in the premises. The amount so determined was unsatisfactory to claimant, and [fol. 6] claimant elected to be paid 75% thereof and to sue the United States to recover such further sum as added to such 75% would make up such amount as would be just compensation to it; and thereupon claimant and the Fleet Corporation entered into a supplemental agreement dated June 2, 1920, to that effect relating to this and the other causes of action set forth in this petition, copy of which is made part hereof marked Exhibit E. Pursuant to said

agreement, such 75% or $66,542.72 was paid to claimant, and a proportionate part thereof applies to this cause of action.

12. That the just compensation to which claimant became entitled by reason of the foregoing includes the following items, viz.:

Expenses and obligations necessarily incurred by claimant in obtaining said Supple & Ballin contract and in performance of the same up to January 2, 1919, when work thereon was suspended by direction of the Fleet Corporation as aforesaid	$45,918.73	
Profits which claimant would have made had said Supple & Ballin contract been completely performed	37,959.16	
Expenses and costs necessarily incurred by claimant in caring for, handling and storing materials acquired for the performance of said Supple & Ballin contract from the date of suspension of work thereon, and reasonable value of claimant's space occupied by said materials during said period	6,750.00	
[fol. 7] Additional costs and expenses necessarily incurred by claimant due to suspension of work on said Supple & Ballin contract and defendant's refusal to perform the same	14,000.00	
Making a total of		$104,627.89
Less the following credits:		
Amount paid to claimant by Supple & Ballin on account of said Supple & Ballin contract, credit for which was taken by defendant	$15,000.00	

Agreed credit for salvage value of materials purchased for performance of said Supple & Ballin contract	3,011.88	
		18,011.88
Leaving a balance of		$86,616.01

together with such additional amount by way of interest as may be justly due claimant for the delay in payment of said compensation.

13. That no part of said compensation has been paid to claimant except only the proportionate part of the $66,542.72 (the 75% payment mentioned in paragraph 11 hereof) applicable to this cause of action, and, therefore, claimant is justly entitled to recover of and from defendant the sum of $86,616.01 and interest thereon as aforesaid, less said proportionate part of said $66,542.72 payment, and claim is hereby made therefor; and claimant is justly entitled to the amount herein claimed from the United States after allowing all just credits and offsets.

14. In preparing for the performance of the contracts referred to in this petition and certain other contracts, [fol. 8] claimant at great expense enlarged its factory buildings and purchased and installed additional machinery and equipment. In the event that for any reason the Court shall not include as a part of claimant's just compensation the full amount of profits which claimant would have made by performance of the Supple & Ballin contract, claimant is entitled to recover from defendant a proportionate share amounting to $11,670.54 of said costs and expenses incurred by claimant in so enlarging its plant and procuring additional machinery and equipment; and in such event claim is hereby made for said amount together with such additional amount by way of interest as may be justly due claimant for delay in payment of said compensation.

15. Claimant's claim for just compensation is founded upon the following:

a. The provision of the Fifth Amendment to the Constitution of the United States, which provides, "Nor shall

private property be taken for public use without just compensation."

b. The said act of Congress of June 15, 1917, and the order of the President of the United States of July 11, 1917, hereinbefore referred to.

16. Claimant is the only person owning an interest in the claims herein set forth, and no assignment or transfer of the same or any part thereof or interest therein has been made, except as stated in this petition.

Claimant has at all times borne true allegiance to the Government of the United States and has not in any way voluntarily aided, abetted or given encouragement to rebellion against it. The claimant believes the facts as stated in this petition to be true.

Second Cause of Action

17. Claimant repeats the allegations of paragraph 1 hereof.

18. On or about December 31, 1917, claimant entered into a contract with G. M. Standifer Construction Corporatio. [fol. 9] a body corporate doing business in the State of Washington, under which claimant agreed to furnish to said G. M. Standifer Construction Corporation certain turbine equipment for ships consisting of ten 3,000 H. P. geared marine turbines described in said contract and accompanying specifications, and whereby said G. M. Standifer Construction Corporation agreed to pay claimant therefor $735,000 in certain installments. Copy of said contract is made part hereof marked Exhibit B-1. Said contract will be referred to as the Standifer contract.

19. Thereafter and on and prior to receipt by claimant on or about March 1, 1918 of the requisition order hereinafter mentioned, claimant was engaged in the performance of its obligations under said Standifer contract, which contract was in full force and effect; claimant had provided itself with materials, equipment and labor to perform said contract; had partly performed the same and was in all respects ready, able and willing to complete such performance, and by so doing would have made large profits. Claimant had received from said G. M. Standifer Construc-

tion Corporation the sum of $73,500 on account of the purchase price of said turbine equipment.

20. Claimant repeats the allegations of paragraph 4 hereof.

21. On or about March 1, 1918, the Fleet Corporation under and by virtue of the Act of Congress and Executive Order aforesaid made and delivered to claimant a requisition order, copy of which is made part hereof marked Exhibit B-2. By said requisition order, said Fleet Corporation appropriated the rights and benefits of said G. M. Standifer Construction Corporation under said Standifer contract and assumed the unfulfilled obligations of said G. M. Standifer Construction Corporation under said contract, and appropriated claimant's property including its rights against G. M. Standifer Construction Corporation [fol. 10] under said contract and the materials, appurtenances and devices pertaining thereto. Said Standifer contract requisitioned as aforesaid was given the number 5006 by the Fleet Corporation and was thereafter commonly referred to as contract No. 5006.

22. In response to said requisition order, Exhibit B-2, claimant on March 4, 1918, by letter of that date, a copy of which marked Exhibit B-3 is made part hereof, forwarded to the Fleet Corporation copies of said Standifer contract, drawings and other data thereunder.

23. From and after March 4, 1918, the Fleet Corporation asserted that it had succeeded to the rights and obligations of G. M. Standifer Construction Corporation under said Standifer contract, including the right to credit for said partial payment of $73,500. The Fleet Corporation kept said contract alive for its benefit, took credit for said payment of $73,500 on account and assumed the right to require and did require performance thereof by claimant for its benefit except as hereinafter set forth; and, as required by the Fleet Corporation, claimant from and after the 1st day of March, 1918, did continue to perform for the benefit of the United States all of its obligations under said Standifer contract.

24. The Fleet Corporation on or about February 19, 1919, directed claimant to suspend work on four of the turbines then being built by claimant under said Standifer contract,

to make no additional commitments or expenditures, and to perform no additional work in connection therewith; and thereafter on or about April 14, 1919, directed claimant to suspend work on five additional turbines being built by claimant under said Standifer contract, to make no additional commitments or expenditures and to perform no additional work in connection therewith. Upon receipt of such directions, claimant did suspend its performance of said contract so far as it related to nine turbines, and notwithstanding that claimant was in all respects ready, able and willing to complete its performance of the same, the [fol. 11] Fleet Corporation informed claimant that it would not further perform said contract so far as it related to said nine turbines, that it had the right to cancel and had cancelled said contract so far as it related to said nine turbines, and it did not perform said contract so far as it related to said nine turbines.

Claimant completed and delivered to the United States certain of said turbine equipment, consisting of one complete turbine and sixteen oil pumps, under said Standifer contract. And defendant thereafter paid directly to claimant on account of said turbine and oil pumps completed and delivered as aforesaid the sum of $78,220, in accordance with said Standifer contract.

That prior and up to the time said suspension orders were made as aforesaid, claimant had expended large sums of money and incurred obligations in obtaining said contract and in and about performance of said contract, which expenditures and obligations with respect to said nine turbines amounted to $169,772.74; that at the times of said suspension orders, claimant had duly performed all obligations theretofore required to be performed by it under said contract and was in all respects ready, able and willing to complete performance of said contract according to its terms and could have fully performed said contract at a total cost to it (including the aforesaid $169,772.74) of $416,234.50, and would have made a profit thereby of $318,765.50.

25. The materials acquired by claimant for performance of said Standifer contract were large and cumbersome, and at the time of said suspension were in various parts of claimant's factory and occupied a large area of floor space which was of the highest value to claimant for manufactur-

ing purposes; some of them were in the main machine shop and main casting yard of claimant, and were of great weight and volume and could be moved only with cranes, and some required to be protected from the elements. Claimant had no other place where they could be stored. [fol. 12] Defendant failed, refused and neglected, until on or about the 14th day of January, 1920, to release said materials from the effect of said requisition order or to allow claimant to dispose of same or to make any provision for the removal, care, storage or disposition of the same, and therefore claimant was compelled to and did care for, handle, move about and store said materials, and was thereby put to large expense. The expenses and costs necessarily incurred by claimant in so caring for, handling and storing said materials and the reasonable value of claimant's space occupied by said materials during said period amounted to $26,500, and in addition thereto, claimant's other manufacturing operations were greatly impeded and the cost thereof greatly increased.

26. The sudden suspension of work on said Standifer contract caused large additional costs to claimant for additional clerical hire, additional manufacturing costs and interference with the efficiency of its plant, which costs amounted to $70,000.

27. Claimant repeats the allegations of paragraph 11 hereof.

28. That the just compensation to which claimant became entitled by reason of the foregoing includes the following items, viz:

Expenses and obligations (with respect to nine turbines upon which work was suspended as aforesaid) necessarily incurred by claimant in obtaining said Standifer contract and in performance of same up to said dates when work on said nine turbines was suspended by direction of Fleet Corporation as aforesaid	$169,772.74

Expenses and obligations (with respect to one turbine and sixteen oil pumps completed [fol. 13] and delivered as aforesaid) necessarily incurred by claimant in obtaining said Standifer contract and in performance of same	53,782.03	
Profits which claimant would have made had said Standifer contract been completely performed	318,765.50	
Expenses and costs necessarily incurred by claimant in caring for, handling and storing materials acquired for the performance of said Standifer contract (excluding materials for one turbine and sixteen oil pumps completed and delivered as aforesaid) from the aforesaid dates of suspension of work thereon, and reasonable value of claimant's space occupied by said materials during said period	26,500.00	
Additional costs and expenses necessarily incurred by claimant due to suspension of work and defendant's refusal to perform said Standifer contract as to nine turbines	70,000.00	
Making a total of		$638,820.27

Less the following credits:

Amount paid to claimant by G. M. Standifer Construction Corporation on account of said Standifer contract, credit for which was taken by defendant	73,500.00	

[fol. 14] Amounts paid by defendant to claimant on account of said Standifer contract.....	78,220.00	
Agreed credit for salvage value of materials purchased for performance of said Standifer contract	10,684.15	
		162,404.15
Leaving a balance of.....		$476,416.12

together with such additional amount by way of interest as may be justly due claimant for the delay in payment of said compensation.

29. That no part of said compensation has been paid to claimant except only the proportionate part of the $66,542.72 (the 75% payment mentioned in paragraph 11 hereof) applicable to this cause of action, and, therefore, claimant is justly entitled to recover of and from defendant the sum of $476,416.12 and interest thereon as aforesaid, less said proportionate part of said $66,542.72 payment, and claim is hereby made therefor; and claimant is justly entitled to the amount herein claimed from the United States after allowing all just credits and offsets.

30. In preparing for the performance of the contracts referred to in this petition and certain other contracts, claimant at great expense enlarged its factory buildings and purchased and installed additional machinery and equipment, and purchased certain machine tools for the performance of said Standifer contract. In the event that for any reason the Court shall not include as a part of claimant's just compensation the full amount of profits which claimant would have made by performance of the Standifer contract, claimant is entitled to recover from defendant a proportionate share amounting to $50,537.68 of said costs and expenses incurred by claimant in so enlarging its plant and procuring additional machinery and equipment [fol. 15] and the cost of said machine tools purchased for the performance of said Standifer contract less a reasonable allowance for their future use value, amounting to $70,000, or a total of $120,537.68; and in such event claim is hereby made for said amount of $120,537.68 together with such additional amount by way of interest as may be justly due claimant for delay in payment of said compensation.

31. Claimant repeats the allegations of paragraphs 15 and 16 hereof.

Third Cause of Action

32. Claimant repeats the allegations of paragraph 1 hereof.

33. On or about March 15, 1917, claimant entered into a contract with Turbine Equipment Company, a corporation of the State of New Jersey, whereby claimant agreed to furnish to said Turbine Equipment Company for Luckenbach Company, Inc., certain turbine equipment for ships consisting of four 2,500 shaft horse power De Laval marine turbine sets, reduction gears and certain accessories therefor described in said contract and accompanying specifications, and whereby said Turbine Equipment Company agreed to pay claimant $216,000 therefor in certain installments. Thereafter by written orders of Turbine Equipment Company dated respectively April 16, 1917 and May 5, 1917 and duly accepted by claimant, claimant agreed to furnish said Turbine Equipment Company with certain spare parts for said turbine equipment, and said Turbine Equipment Company agreed to pay claimant therefor $12,530. A copy of the first mentioned contract between claimant and said Turbine Equipment Company is made a part hereof, marked Exhibit C-1; and copies of said orders of Turbine Equipment Company for spare parts for said turbine equipment are made a part hereof, marked Exhibit C-3. Said contracts (Exhibit C-1 and C-3) will be hereafter referred to as the Turbine Equipment contract.

[fol. 16] 34. Thereafter and on and prior to receipt by claimant on or about January 12, 1918 of the requisition order hereinafter mentioned, claimant was engaged in the performance of its obligations under said Turbine Equipment contract, which contract was in full force and effect; claimant had provided itself with materials, equipment and labor to perform said contract, had partly performed the same and was in all respects ready, able and willing to complete such performance, and by so doing would have made large profits; and claimant had received from said Turbine Equipment Company the sum of $68,559 on account of the purchase price of said turbine equipment.

35. Claimant repeats the allegations of paragraph 4 hereof.

36. On or about January 12, 1918, the Fleet Corporation under and by virtue of the Act of Congress and Executive Order aforesaid made and delivered to claimant a requisition order, copy of which is made part hereof marked Exhibit C-7. By said requisition order, said Fleet Corporation appropriated the rights and benefits of Turbine Equipment Company under said Turbine Equipment contract and assumed the unfulfilled obligations of Turbine Equipment Company under said contract and appropriated claimant's property including its rights against Turbine Equipment Company under said contract and the materials, appurtenances and devices pertaining thereto. Said Turbine Equipment contract requisitioned as aforesaid was given the number 5012 by the Fleet Corporation, and was thereafter commonly referred to as contract No. 5012.

37. From and after January 12, 1918, the Fleet Corporation asserted that it had succeeded to the rights and obligations of Turbine Equipment Company under said Turbine Equipment contract. The Fleet Corporation kept said contract alive for its benefit and assumed the right to require and did require performance thereof by claimant for its benefit, except as hereinafter set forth; and, as required [fol. 17] by the Fleet Corporation, claimant from and after the 12th day of January, 1918 did continue to perform for the benefit of the United States all of its obligations under said Turbine Equipment contract.

38. On or about January 2, 1919, the Fleet Corporation directed claimant to suspend all work on said Turbine Equipment contract, to make no additional commitments or expenditures and to perform no additional work in connection therewith. Upon receipt of such direction, claimant did suspend its performance of said contract, and notwithstanding that claimant was in all respects ready, able and willing to complete its performance of the same, the Fleet Corporation informed claimant that it would not further perform said contract, that it had the right to cancel and had cancelled the same, and it did not perform said contract. That prior and up to the time said suspension order was made as aforesaid, claimant had expended large sums of money and incurred obligations in obtaining said contract and in and about performance of said contract, which obligations and expenditures amounted to $73,008.16; that

at the time of said suspension order, claimant had duly performed all obligations theretofore required to be performed by it under said contract and was in all respects ready, able and willing to complete performance of said contract according to its terms and could have completed said performance at a further cost of $141,582.69 and would have made a profit thereby of $13,939.15.

39. The materials acquired by claimant for performance of said Turbine Equipment contract were large and cumbersome, and at the time of said suspension were in various parts of claimant's factory and occupied a large area of floor space which was of the highest value to claimant for manufacturing purposes; some of them were in the main machine shop and main casting yard of claimant, and were [fol. 18] of great weight and volume and could be moved only with cranes, and some required to be protected from the elements. Claimant had no other place where they could be stored. Defendant failed, refused and neglected, until on or about the 14th day of January, 1920, to release said materials from the effect of said requisition order or to allow claimant to dispose of same or to make any provision for the removal, care, storage or disposition of the same, and therefore claimant was compelled to and did care for, handle, move about and store said materials, and was thereby put to large expense. The expenses and costs necessarily incurred by claimant in so caring for, handling and storing said materials and the reasonable value of claimant's space occupied by said materials during said period amounted to $16,750, and in addition thereto, claimant's other manufacturing operations were greatly impeded and the cost thereof greatly increased.

40. The sudden suspension of work on said Turbine Equipment contract caused large additional costs to claimant for additional clerical hire, additional manufacturing costs and interference with the efficiency of its plant, which costs amounted to $16,000.

41. Claimant repeats the allegations of paragraph 11 hereof.

42. That the just compensation to which claimant became entitled by reason of the foregoing includes the following items, viz:

Expenses and obligations necessarily incurred by claimant in obtaining said Turbine Equipment contract and in performance of the same up to January 2, 1919, when work thereon was suspended by direction of the Fleet Corporation as aforesaid	$73,008.16	
[fol. 19] Profits which claimant would have made had said Turbine Equipment contract been completely performed	13,939.15	
Expenses and costs necessarily incurred by claimant in caring for, handling and storing materials acquired for the performance of said Turbine Equipment contract from the date of suspension of work thereon, and reasonable value of claimant's space occupied by said materials during said period	16,750.00	
Additional costs and expenses necessarily incurred by claimant due to suspension of work on said Turbine Equipment contract and defendant's refusal to perform the same	16,000.00	
Making a total of		$117,697.31
Less the following credits:		
Amount paid to claimant by Turbine Equipment Company on account of said Turbine Equipment contract	$68,559.00	
Agreed credit for salvage value of materials purchased for performance of said Turbine Equipment contract	5,612.32	
		74,171.32
Leaving a balance of		$45,525.99

[fol. 20] together with such additional amount by way of interest as may be justly due claimant for the delay in payment of said compensation.

43. That no part of said compensation has been paid to claimant except only the proportionate part of the $66,542.72 (the 75% payment mentioned in paragraph 11 hereof) applicable to this cause of action, and, therefore, claimant is justly entitled to recover of and from defendant the sum of $45,525.99 and interest thereon as aforesaid, less said proportionate part of said $66,542.72 payment, and claim is hereby made therefor; and claimant is justly entitled to the amount herein claimed from the United States after allowing all just credits and offsets.

44. In preparing for the performance of the contracts referred to in this petition and certain other contracts, claimant at great expense enlarged its factory buildings and purchased and installed additional machinery and equipment. In the event that for any reason the Court shall not include as a part of claimant's just compensation the full amount of profits which claimant would have made by performance of the Turbine Equipment contract, claimant is entitled to recover from defendant a proportionate share amounting to $17,781.78 of said costs and expenses incurred by claimant in so enlarging its plant and procuring additional machinery and equipment; and in such event claim is hereby made for said amount together with such additional amount by way of interest as may be justly due claimant for delay in payment of said compensation.

45. Claimant repeats the allegations of paragraphs 15 and 16 hereof.

Fourth Cause of Action

46. Claimant repeats the allegations of paragraphs 1 and 4 hereof.

47. On or about April 20, 1918, the Fleet Corporation by its purchase order No. P. D. 1779, directed to and duly [fol. 21] accepted by claimant, agreed to purchase from claimant and claimant agreed to sell to the Fleet Corporation certain sets of spare parts for turbine equipments constructed or then being constructed by claimant for the Fleet Corporation, including among others 4 sets of spare

parts for the turbine equipment specified in the Supple & Ballin contract referred to in the first cause of action herein, 9 sets of spare parts for the turbine equipment specified in the Standifer contract referred to in the second cause of action herein, and 2 sets of spare parts for the turbine equipment specified in the Turbine Equipment contract referred to in the third cause of action herein. A copy of said order marked Exhibit D-1 is made a part hereof. Thereafter and on or about March 31, 1919, the Fleet Corporation by its order, directed to and duly accepted by claimant, modified said purchase order by eliminating therefrom certain spare parts. A copy of said order of modification marked Exhibit D-2 is made part hereof. Said purchase order as so modified and accepted in so far as it relates to the spare parts above mentioned for the turbine equipment specified in said Supple & Ballin, Standifer and Turbine Equipment contracts (no claim being made herein regarding any other sets of spare parts covered by said purchase order) will be referred to herein as contract P. D. 1779.

48. On and prior to receipt by claimant of the hereinafter mentioned orders of suspension, claimant was engaged in the performance of its obligations under contract P. D. 1779, which contract was in full force and effect; claimant had provided itself with materials, equipment and labor to perform said contract, had partly performed the same, and was in all respects ready, able and willing to complete such performance, and by so doing would have made large profits.

49. On or about February 19, 1919, the Fleet Corporation directed claimant to suspend all work on 4 sets of the spare parts for turbines specified in said contract P. D. 1779, to make no additional commitments or expenditures [fol. 22] and to perform no additional work in connection therewith; and on or about April 14, 1919, the Fleet Corporation directed claimant to suspend all work on the other sets of spare parts specified in contract P. D. 1779, to make no additional commitments or expenditures and to perform no additional work in connection therewith. Upon receipt of such directions and in accordance therewith, claimant did suspend its performance of said contract; and notwithstanding that claimant was in all re-

spects ready, able and willing to complete its performance of the same, the Fleet Corporation thereafter informed claimant that it would not further perform said contract, that it had the right to cancel and had cancelled the same, and it did not perform said contract. That prior and up to the time said suspension orders were made as aforesaid, claimant had expended large sums of money and incurred obligations in obtaining said contract P. D. 1779 and in and about the performance of said contract, which obligations and expenditures amounted to $9,295.16; that at the time of said suspension orders, claimant had duly performed all the obligations theretofore required to be performed by it under said contract P. D. 1779 and was in all respects ready, able and willing to complete performance of said contract according to its terms and could have completed said performance at a further cost of $16,586.22, and would have made a profit thereby of $32,927.62.

50. Claimant repeats the allegations of paragraph 11 hereof.

51. That the just compensation to which claimant became entitled by reason of the foregoing includes the following items, viz:

Expenses and obligations necessarily incurred by claimant in obtaining said contract P. D. 1779 and in performance of the same, up to dates when work thereon was suspended by direc- [fol. 23] tion of the Fleet Corporation as aforesaid	$9,295.16	
Profits which claimant would have made had said contract P. D. 1779 been completely performed	32,927.62	
Making a total of		$42,222.78
Less the following credit:		
Agreed credit for salvage value of materials purchased for performance of said contract P. D. 1779		841.53
Leaving a balance of		$41,381.25

together with such additional amount by way of interest as may be justly due claimant for the delay in payment of said compensation.

52. That no part of said compensation has been paid to claimant except only the proportionate part of the $66,542.72 (the 75% payment mentioned in paragraph 11 hereof (applicable to this cause of action, and, therefore, claimant is justly entitled to recover of and from the defendant the sum of $41,381.25 and interest thereon as aforesaid, less said proportionate part of said $66,542.72 payment, and claim is hereby made therefor; and claimant is justly entitled to the amount herein claimed from the United States after allowing all just credits and offsets.

53. Claimant repeats the allegations of paragraphs 15 and 16 hereof.

Summary of Claims

54. The just compensation due claimant by reason of the foregoing causes of action is $649,939.37, plus such additional amount by way of interest at the rate of 6% per annum as will compensate claimant for the delay in mak- [fol. 24] ing such just compensation, less the sum of $66,542.72 paid claimant as aforesaid; and claimant is justly entitled to said amount from the United States after allowing all just credits and offsets.

Wherefore claimant prays judgment against the United States in the sum of $649,939.37, plus such additional amount by way of interest at the rate of 6% per annum as will compensate claimant for the delay in making such just compensation, less the sum of $66,542.72 paid claimant as aforesaid; and for such other relief as the Honorable Court may grant, both at law and in equity in the premises.

De Laval Steam Turbine Company, by Frank W. Kennedy, Vice-President. Jesse C. Adkins, Attorney for Claimant. Davis, Wagner, Heater & Holton, of Counsel.

Duly sworn to by Frank W. Kennedy. Jurat omitted in printing.

[fol. 25] EXHIBIT A-1

Proposal-Contract

De Laval Steam Turbine Company, Trenton, N. J.

Proposal No. —. Date: May 11, 1917

[Trade-Mark]

To Messrs. Supple and Ballin, Portland, Oregon:

We Propose to furnish you, f. o. b. cars Trenton, N. J.: Four (4) De Laval 1500 BHP Marine Turbines, with suitable double-helical, single pinion, gear reductions for a propeller speed of 90 RPM, the same being the material or machinery described in the specifications hereto attached and made a part hereof, and subject to the conditions herein stated, for the sum of One Hundred Fifty Thousand Dollars ($150,000.00).

Payable in New York exchange, free of expense to us for collection charges.

Terms of payment to be:

10% cash with order.
60% cash when shipped.
20% cash thirty (30) days after shipment.
10% cash sixty (60) days after shipment.
Shipment—see following page.

It is intended that the machinery is to be free from latent defects in material and workmanship, and should any part of it be found within one year from date of shipment to have been defective at the time furnished we will repair said part f. o. b. our Works, or will furnish without charge f. o. b. our Works a similar part to replace it; provided the original part is returned to our Works, freight [fol. 26] prepaid, and our inspection establishes the claim. We will make no allowances for repairs or alterations unless the same are made with our written consent or approval.

The machinery shall be installed by you at your expense unless otherwise expressly stipulated. If we furnish an engineer to superintend for you the erection and starting of any of the machinery you are to pay us for his services

at the rate of $7.00 per regular working day and all necessary expenses. Any man we may supply, in any circumstances, shall be understood to be employed by you.

Without relieving you of the obligation to make payment as provided for and without reference to the form of invoice that may be used by us, it is agreed that the title to the machinery or material we furnish remains in us until the full purchase price hereunder (including any modifications or extensions of payment, whether evidenced by notes or otherwise) shall have been fully paid in cash; and you are to do all acts necessary to perfect and maintain such retention of title in us.

It is understood that the machinery hereunder shall retain its personal character and shall not become a fixture by being placed in any building or in any manner whatsoever annexed to any land. Further, that if said machinery is placed upon mortgaged or encumbered premises, it shall be without prejudice to our retention of title thereto as herein provided.

Fire insurance in an amount sufficient to protect our interest in the material or machinery sold is to be taken out and maintained by you until the same may have been fully paid for, and the policies of insurance are to be made payable to us as our interest may appear at the time of loss; you to assume all loss resulting from fire in event of your not having effected such insurance.

If by your wish a part of the machinery be shipped in advance of the whole proportionate payment shall be made as of such date for such part; and if shipment, or any other [fol. 27] act or condition affecting payment for the machinery, or any part thereof, shall be delayed on your account, it is understood that payments shall be due as though shipment had been made and any other act or condition fulfilled. In case of delay in shipment at your instance it is also agreed that charge shall be made for storage and that such storage shall be at your risk.

Delivery to a transporting carrier shall constitute delivery to you, and if the purchase price covers and the delivery specified is other than f. o. b. factory you are to pay freights, charging same to our account.

The delivery, or erection if any, herein specified, is subject to civil and military authority, any delay on your

part in supplying us with necessary data or any changes in same, as well as to delays due to fires, floods, strikes, accidents or other causes beyond our reasonable control, and in no case shall we be liable for consequential damages. The taking by you of any of the machinery from the transporting carrier shall constitute a waiver of any claim in respect to delivery.

This proposal is made in duplicate and shall become a contract between us when accepted by you in writing and thereafter approved by an executive officer of this Company. It embodies all the understandings between the parties as to its subject matter and shall not be modified or amended except in writing authoritatively signed by the parties.

This proposal is made for prompt acceptance, conditional upon executive approval as provided for, and the price or prices named are subject to change without notice.

De Laval Steam Turbine Company, by Wm. Pullen, Sales Manager, Northwestern Dist.

[fol. 28] Accepted May 11, 1917.

(Purchaser sign here:) Supple & Ballin. Joseph Supple, Fred A. Ballin, Partners.

Trenton, N. J., May 18th, 1917.

Approved by F. W. Kennedy, Vice-President and General Manager.

This contract is accepted and approved on the understanding and condition that the firm of Supple & Ballin is an unlimited copartnership.

Shipping Instructions

Mark and ship: ——.
(To be filled in by Purchaser)

Accompanying Proposal of De Laval Steam Turbine Company to Messrs. Supple and Ballin

Proposal No. —. Specification No. —. Date: May 11, 1917.

Special Data:

Shipment to be made as follows:
First unit—on or before June 15th, 1918.
Second unit—on or before July 15th, 1918.
Third unit—on or before August 15th, 1918.
Fourth unit—on or before September 15th, 1918.

Specifications for De Laval Multi-stage Steam Turbine for Marine Service

* * * * * * *

[fol. 29] Operating Conditions

Steam pressure at throttle, 245 lbs.
Quality of steam, dry saturated.
Exhaust pressure at turbine outlet, 28" vacuum.
The normal rated capacity of the turbine will be 1500 BHP at the normal speed of 4000 RPM.

Steam Consumption

When operating under the conditions specified above the steam consumption of the turbine will not exceed 11.6 lbs. per shaft horsepower hour.

The general dimensions of the turbine and gears covered by this specification are shown on drawing No. E-2286.

The turbine speed of 4000 RPM is reduced to the propeller speed of 90 RPM through two (2) double helical reduction gears, described in later specifications.

Type

The De Laval marine multi-stage steam turbine is of the pure impulse type, consisting of a series of impulse wheels, each running in a separate compartment, the steam pressure being the same on both sides of each wheel so that it does not generate axial thrust, and the steam economy is in no wise dependent upon the maintenance of small vane clearances. All working parts of the machine are built to limit gages and are strictly interchangeable, and all parts that may have to be disassembled for any reason are furnished with taper dowels, to insure correct and easy reassembling; the construction is simple and

rugged, in order to insure safe, satisfactory and reliable operation. The turbine is especially designed to meet the requirements of marine service.

Reversing of the turbine is provided for by means of a special reversing element located at the exhaust end of the turbine.

[fol. 30]

Rotation

The rotation of the slow speed gear shaft will be clockwise when viewed from the after end.

Wheels and Blades

The wheels are forged steel discs, finished on all surfaces and proportioned to withstand safety rotating speeds much higher than the normal operating speed of the turbine. The wheels are carefully balanced individually and again after assembling upon the shaft. The moving buckets are firmly secured on the rims of the wheels. The buckets consist of a special metal which has proven to be the best material for resisting the corrosive and erosive action of steam. They are formed by a process which imparts a smooth hard surface that has been found to resist the action of water and steam with minimum erosion.

Diaphragms and Guide Vanes

Each diaphragm consists of a case iron disc supporting the guide vanes. The guide vanes are accurately formed in dies and finally hammered to give the surface a hard polish and to improve the density and strength of the metal.

Wheel Case

The diaphragms are held in a cast iron wheel case, split horizontally to provide quick access to all working parts of the turbine. The wheel case is supported in such manner that it is free to expand in all directions without changing the position of its axis, so that the center line of the wheel case and the center line of the shaft coincide under all conditions. By reason of this construction, the turbine may be started quickly and safely without danger of rubbing, vibration or other troubles due to distortion.

[fol. 31]

Shaft

The turbine shaft in a steel forging, ground on all surfaces. It is of large size, in order that the critical speed be far higher than the normal running speed of the turbine. This prevents the possibility of vibration of the shaft, in case the wheels should be thrown slightly out of balance due to any cause.

Shaft Packings

To prevent leakage of steam outward or air inward along the shaft, steam sealed carbon ring packings are provided. The slight leakage of steam from the high pressure packing is used to seal the low pressure packing of the turbine. Leakage along the shaft from stage to stage is prevented by removable labyrinth packings held by the diaphragms.

Bearings and Pedestals

The bearing shells are of cast iron, lined with high grade babbitt. The babbitt lining is bored and reamed to standard dimensions, and the exteriors of the bearing shells are ground on all contact surfaces to provide for absolute interchangeability. The bearings are split to permit of their removal without disturbing the shaft.

The bearing brackets are of heavy construction, scraped to standard lining bars to insure alignment of the shaft and perfect interchangeability of bearing shells. The brackets contain ample oil reservoirs and the bearing caps and pedestals are recessed to prevent the seepage of oil through the joints between caps and pedestals.

Thrust Bearing

The De Laval multi-stage turbine does not generate axial thrust, as each wheel is surrounded by steam at one pressure and is thus in itself balanced, but in order to maintain the position of the shaft, and in order to determine the [fol. 32] clearances of the turbine, an adjustable thrust bearing is provided.

Governor and Governor Valve-safety Governor

This proposal includes the main throttle control of the turbine. The unit will also be provided with a safety gov-

ernor which will automatically prevent the turbine from reaching a speed ten per cent (10%) in excess of normal if overspeeded from any cause—such as the breaking of a propeller shaft, or the lifting of the propellers from the water in heavy seas.

Lubrication

The turbines and gears will be designed for forced feed lubrication. A suitable oil pump will be furnished to supply the necessary oil at 5 lbs. gage pressure. A strainer and cooler of proper size will be supplied to properly cool the oil required. The purchaser is to supply two oil reservoirs, each of approximately 500 gallons capacity. One of these reservoirs will be elevated to a proper height to give from 3 to 5 lbs. pressure on the turbine and gear bearings. The second tank is to be located in such a position that the oil flowing from the turbine and gear bearings can drain into same. The oil pump supplied under this proposal will be of such size that it will properly remove the oil from the drain tank and elevate same to the overhead gravity tank. The oil piping necessary on the turbine and gear reductions proper will be furnished under this proposal.

Supports

It is understood that no bedplate for either turbines or gears is included under these specifications, and the purchaser is to provide rigid steel supports for the proper supporting of the turbine and gear cases. The purchaser agrees to supply drawings showing the design of the supporting frames, for our approval, before final installation.

[fol. 33]

Flexible Coupling

A De Laval flexible coupling is provided for connecting the turbine to the reduction gears. The couplings can be quickly disconnected, which permits the removal of the turbine shaft without disturbing the shaft of the driven machine. Each coupling disc is fastened to the shaft by means of a taper fit and key, and locked in place by means of a lock nut.

Equipment, Painting, etc.

There will be furnished with the turbine a complete set of eye bolts for handling the different parts, together with any special wrenches necessary.

All parts of the turbine will be given two coats of filler, rubbed smooth, and one coat of flat paint before shipment—all painting after shipment to be done by the purchaser.

All supplies, oils, etc., for the proper erection, assembling and starting of the turbine are to be furnished by the purchaser.

* * * * * * *

Specifications for De Laval Double Helical Marine Reduction Gear

Operating Conditions

When operating at normal turbine speed, the gear reduction will be so proportioned that the speed of the gear shaft of the second gear reduction will be 90 R.P.M.

General Description

The gear and pinion are cut in the most accurate possible manner on special machines designed and built by this company. Each gear, after cutting, is tested for correct angle, correct shape of tooth and correct pitch and no [fol. 34] gear is used that is not correct and that does not have an even contact surface for the whole length of every tooth. The teeth are of such shape to give as closely as possible perfect rolling contact and no scraping or hand work is permitted, since such hand work would produce imperfect contour of teeth. After cutting, the gear teeth are carefully polished by a special process which eliminates the small inequalities left by the cutting tool, without altering the profile of the teeth.

Gear Case and Cover

The bottom half of the gear case is a single casting which contains both gear and pinion bearings, holding them in rigid alignment and maintaining the correct spacing between the centers of the gear and pinion and also preventing any movement which would tend to produce unequal

pressure, hammering and vibration that would result in rapid wear of the gear and pinion.

The bearing seats are carefully scraped to standard size to permit perfect interchangeability of bearings.

The bearing caps are separate and anyone can be removed without disturbing any other parts.

All parts of the reduction gear that may be disassembled for inspection are furnished with taper dowels to insure correct reassembling and all working parts are made to standard limit gages and are strictly interchangeable.

The cover is so arranged that it can be removed without disturbing the bearing caps or any other parts.

Bearing

Gear and pinion bearings consist of cast iron shells lined with high grade babbitt and ground on all contact surfaces to standard dimensions to insure exact alignment and perfect interchangeability. They are split to allow of removal without disturbing any part of the shafts, and any bearing can be removed without disturbing any part other [fol. 35] than the cap. All bearings are provided with oil catchers and all shafts with oil slingers to prevent the creeping of oil along the shafts.

Gear

The gear consists of a cast iron center, on which are shrunk two seamless rolled steel bands in which the gear teeth are cut. The gear center is of such shape as to have great strength and be free from distortion by excessive strains or rapid temperature changes. The gear bands are of special steel, heat treated to secure uniform material and proper hardness for the gear teeth. The gear, after complete assembling, is carefully tested for static and running balance.

The gear shaft is of hammer-forged open-hearth steel, ground on all surfaces to standard dimensions. It is fastened in the gear center by means of a taper fit and key.

Pinion

The pinion is cut directly on the pinion shaft, which is a special steel forging, oil tempered to have a hardness much greater than that of the gear bands, in order to pro-

vide different quality of metals in contact and to secure long life of the pinion. The pinion is ground on all surfaces and carefully tested for static and running balance.

Oiling System

The gear and pinion are lubricated by a spray of oil projected against the line of contact of the gear teeth on the entering side, thus insuring ample lubrication.

The gear and pinion bearings are oiled from the pressure system. An oil feed indicator will be provided for each bearing. The oil, after passing through the bearings, drains into the drain tank provided by the purchaser and can be returned to the main oil tank.

[fol. 36] The gear case and cover, as well as all bearing caps, are provided with recessed oil grooves to prevent seepage of oil through the joints.

Flexible Couplings

Flexible couplings will be provided between the first and second gear reductions and one coupling half will be supplied on the shaft of the second reduction for connection to the propeller shaft,—the coupling half to be mounted on the propeller shaft is to be furnished by the purchaser.

It is understood that the thrust bearing which will be furnished and installed by the purchaser will be of such design as will permit of no greater movement than one-eighth inch (⅛″) and that this difference will be taken up by the two gear couplings.

Bedplates

No bedplates will be furnished for the gear reductions, it being understood that they are to be supported on steel frames provided by the purchaser.

[fol. 37] EXHIBIT A-2

U. S. Shipping Board Building, 1319 F Street N.W.

United States Shipping Board Emergency Fleet Corporation, Washington

January 12, 1918.

De Laval Steam Turbine Co., Trenton, N. J.

GENTLEMEN: By virtue of an Act of Congress, approved June 15, 1917, and entitled "An Act Making Appropriations to Supply Urgent Deficiencies in Appropriations for

the Military and Naval Establishments on account of War Expenses for the Fiscal Year ending June 30, 1917, and for other Purposes," and by authority delegated thereunder to the United States Shipping Board Emergency Fleet Corporation by Executive Order of the President dated July 11, 1917, and by virtue of any other powers granted by law, certain propelling turbines for ships, requistioned or building for the Emergency Fleet Corporation, including materials, appurtenances, and devices pertaining thereto, (herein referred to as the "turbine equipments"), and excluding condenser apparatus and other auxilaries, now under construction by you for Supple & Ballin, Portland, Oregon, are hereby requistioned and taken over by the United States; and you are further required to complete the construction and manufacture of the said turbine equipment and to prosecute the work thereunder with all reasonable dispatch. Compliance with this order is mandatory. Upon completion of turbine equipments, shipping directions will be given you.

[fol. 38] The United States will make just compensation for the turbine equipments. In order to determine the amount to be paid thereunder, and to whom such amount shall be paid, you are hereby requested to furnish immediately to the United States Shipping Board Emergency Fleet Corporation copies of all general plans, specifications, contracts, commitments, and other data relative to the turbine equipments, and also to supply full particulars as to the estimated dates of completion, the payments made to date, the amounts unpaid, and any other information that may be pertinent in connection herewith.

Yours very truly, United States Shipping Board Emergency Fleet Corporation, by Frank A. Browne, General Purchasing Officer.

EXHIBIT A-3

Copy

January 18, 1918.

United States Shipping Board, Emergency Fleet Corporation, Washington, D. C.

GENTLEMEN:

Supple & Ballin Company

We beg to acknowledge receipt of your letter of January 12th requisitioning turbine propulsion sets covered by our

proposal contract without number, but dated May 11, 1917, with the Supple & Ballin Company of Portland, Oregon.

We are enclosing copies of the contract in duplicate together with certified drawings No. E-2766 and data as supplied to the Supple & Ballin Company.

[fol. 39] We also wish to advise that under date of May 18, 1917, we received an advance payment of $15,000 on this contract. No other payments have been received to date.

It is our understanding that in taking over these contracts, the United States Shipping Board Emergency Fleet Corporation will make the further purchase payments as therein provided for.

These propulsion sets were originally scheduled for shipment in June, July, August and September 1918, respectively.

We cannot now advise you definitely regarding the actual dates of shipment, but believe that the first of these sets will be ready for shipment in August 1918, the second and third set in October 1918, and the fourth set in November of 1918.

The completion of these units is greatly dependent upon our being able to obtain fuel, pig iron, coke and power to keep our plant in full operation. Some time has already been lost due to our inability to obtain these materials without delay.

We are doing our utmost, however, under existing conditions and greatly appreciate the help we have had in one way and another from the Emergency Fleet Corporation and the Navy Department to this end.

Very truly yours, De Laval Steam Turbine Company,
——— ———, Vice-President and General Manager.

HLW. MJD.

[fol. 40] EXHIBIT A-4

U. S. Shipping Board Building, 1319 F Street N. W.

United States Shipping Board Emergency Fleet Corporation, Washington

January 23, 1918.

Refer to DHB/CKF.

De Laval Steam Turbine Company, Trenton, New Jersey.

DEAR SIRS:

1. In accordance with the requisitioning of turbines that you are building under contracts with various shipbuilders throughout the United States, the Emergency Fleet Corporation assumes the responsibility of these contracts and will make payments to you direct.

2. As General Auditor of the Emergency Fleet Corporation, I request you to forward a copy of all contracts in force and to bill promptly payments as they become due under the various contacts, showing on the face of the vouchers the particular contract to which the payment applies.

3. If you are not supplied with a quantity of our regular voucher forms, will you please communicate with me so that I may issue the necessary instructions to supply you without delay.

Yours very truly, D. H. Bender, General Auditor.

[fol. 41] EXHIBIT B-1

Proposal-Contract

De Laval Steam Turbine Company, Trenton, N. J.

Proposal No. 8183. Date: November 28, 1917

[Trade-Mark]

To G. M. Standifer Construction Corporation (hereinafter called the purchaser), Vancouver, Washington:

The De Laval Steam Turbine Company (hereinafter called the Company) proposes to furnish the Purchaser, f. o. b.

cars as specified, the following apparatus, machinery or materials (hereinafter termed machinery), which is further described in the specifications hereto attached and made a part hereof, subject to the stated conditions:

Ten (10) 3000-HP geared marine turbines designed for a propeller speed of 90-RPM.

Owing to the uncertain conditions of the material market and the difficulty of securing and holding skilled labor, together with the possibility that a readjustment of our manufacturing schedule may be made necessary, owing to the requirements of the U. S. Government, it is understood that the shipping dates specified in this proposal contract are estimated only, and that shipment will be made as specified or at the earliest possible date thereafter—the order not to be subject to cancellation on account of any reasonable delay in shipment. The shipment promise specified herein is based upon the arrival of all the necessary material for each unit in Trenton at least four months prior to the shipping dates.

[fol. 42] Unless otherwise specified the machinery covered by this proposal is to be furnished f. o. b. cars Trenton, N. J. Delivery to the transporting carrier shall constiute delivery to the Purchaser, and if the delivery specified and covered by the purchase price to other than the point of shipment the Purchaser is to pay the freight and charge same to the Company.

The machinery shall be installed by and at the expense of the Purchaser, unless otherwise expressly stipulated. If the Company furnishes an engineer to superintend the erection and starting of any machinery for the Purchaser payment for his services is to be made by the Purchaser at the rate of Ten dollars per day, including the traveling time and plus all proper expenses of said man. Any man supplied by the Company, in any circumstances, shall be understood to be employed by the Purchaser.

It is intended that the machinery is to be free from latent defects in material and workmanship, and should any part of it be found within ninety days from the time of starting to have been defective at the time furnished the Company will repair or replace said part f. o. b. its Works, provided the original part is returned to the Company's Works freight prepaid and its inspection may establish the claim.

No allowance will be made for repairs or alterations unless made with the Company's written consent or approval.

Without relieving the Purchaser from the obligation to make payment as provided for and without reference to the form of invoice that may be used by the Company, it is agreed that the title to the machinery furnished shall remain in the Company until the purchase price (including any extensions of payment, whether evidenced by note or otherwise) shall have been fully paid in cash, and the machinery shall remain the personal property of the Company, whatever may be the mode of its attachment to realty or other property, until fully paid for in cash; and the Purchaser agrees to perform all acts which may be necessary [fol. 43] to perfect and assure retention of title in the Company. In case of failure by the Purchaser to make any payment when due it is expressly understood that it shall be optional with the Company to take exclusive possession of the machinery wherever found and remove same without legal process, and that any payments which may have been made on account of same shall be retained by the Company as liquidated damages, without prejudice to its right of recovery of further or other damage it may suffer from any cause.

Fire insurance in an amount sufficient to protect the Company's interest in the machinery is to be taken out and maintained by the Purchaser until same may have been fully paid for in cash, and such policies of insurance are to be made payable to the Company as its interest may appear at the time of loss, the Purchaser to assume all loss resulting from fire in event of not having effected such insurance.

If part of the machinery is to be shipped in advance of all of it, or may be so shipped by direction of the Purchaser or with the Purchaser's approval, proportionate settlement shall be made therefor in accordance with the specified terms; and if shipment or any other act or condition affecting payment for the machinery or any part thereof shall be delayed on account of the Purchaser payment therefor shall become due as if shipment had been made. In case of delay in shipment at the instance of the Purchaser a reasonable storage charge will be made by the Company, and such storage shall be at the risk of the Purchaser.

It is understood that the specifications hereto attached are a standard form covering the Company's machinery of substantially identical type and character and that there may be immaterial variations therefrom in the details of design and construction of any particular machine. Also that the Company reserves the right to make such changes in details of design, construction, arrangement or equipment of its machinery to be furnished hereunder as shall, in its judgment, constitute an improvement over such [fol. 44] former practice as may be shown or described in the attached specifications.

The specified shipment, or erection if specified, is subject to any delay on the part of the Purchaser in supplying the Company with necessary data or any changes therein at the Purchaser's instance, and to delays caused by fires, floods, strikes, accidents, civil or military authority, or any other cause beyond the Company's reasonable control. In no circumstances shall the Company be liable for special or consequential damages. The taking of any machinery by the Purchaser from the transporting carrier shall constitute a waiver of any claim in respect to delay.

Price: The price of the said machinery is Seven Hundred Thirty-five Thousand Dollars ($735,000.00).

Ten per cent of contract price with signed contract; seventy per cent when shipped; ten per cent thirty days after shipment; ten per cent sixty days after shipment.

Shipment: The first unit covered hereby is to be shipped about January 15, 1919, and the order completed about July 1, 1919, provided the construction of the hulls of the vessels in which these sets are to be installed progresses at a rate to require starting and completion of shipments within the time specified.

In case of delay by the Purchaser in furnishing any required information, or later change in any of the specifications at the instance of the Purchaser, shipment will be extended a reasonable time, according to such delay or change and conditions in the Company's Works.

This proposal is made in duplicate and shall become a contract when accepted by the Purchaser in writing and thereafter approved by an executive officer of the Company at its Home office. The person signing the acceptance of this proposal for the Purchaser hereby represents that he is legally authorized to enter into this contract for the Pur-

chaser. If accepted and approved this contract shall be understood to embody all of the understandings between [fol. 45] the parties as to its subject matter, and shall not be modified or amended except in writing authoritatively signed by the parties.

This proposal is made for prompt acceptance, conditional upon executive approval as provided for, and the price or prices named are subject to change without notice.

De Laval Steam Turbine Company, by H. G. Watson.

Accepted 12/4/1917.

(Purchaser sign here:) G. M. Standifer Const. Corporation, by G. M. Standifer, Pres.

Trenton, N. J., Dec. 31, 1917.

Approved.

F. W. Kennedy, Vice-President.

Shipping Instructions

Mark and ship: ——.

(To be filled in by the Purchaser)

Accompanying Proposal of De Laval Steam Turbine Company to G. M. Standifer Construction Corporation

Proposal No. 8183. Specification No.—. Date: 11-28-17.

Special Data:

Operating Conditions:

Steam pressure at throttle—210#.
Quality of steam—dry saturated.
Exhaust pressure at turbine outlet—2" absolute.
The normal rated capacity of the turbine will be 3,000 HP at the normal speed of 90-RPM.

[fol. 46] Steam Consumption

When operating under the conditions specified above the steam consumption of the turbine will not exceed 11.6 lbs. per shaft horsepower hour.

The general dimensions of the turbine and gears covered by this specification are shown on drawing No. E-2757.

The turbine speed of 3500-RPM is reduced to the propeller speed of 90-RPM through two (2) double helical reduction gears, described in later specifications.

Type

The De Laval marine multi-stage steam turbine is of the pure impulse type, consisting of a series of impulse wheels, each running in a separate compartment, the steam pressure being the same on both sides of each wheel so that it does not generate axial thrust, and the steam economy is in no wise dependent upon the maintenance of small vane clearances. All working parts of the machine are built to limit gages and are strictly interchangeable, and all parts that may have to be disassembled for any reason are furnished with taper dowels to insure correct and easy reassembling; the construction is simple and rugged, in order to insure safe, satisfactory and reliable operation. The turbine is especially designed to meet the requirements of marine service.

Reversing of the turbine is provided for by means of a special reversing element located at the exhaust end of the turbine.

Rotation

The rotation of the slow speed gear shaft will be clockwise when viewed from the after end.

Wheels and Blades

The wheels are forged steel discs, finished on all surfaces and proportioned to withstand safely rotating speeds much [fol. 47] higher than the normal operating speed of the turbine. The wheels are carefully balanced individually and again after assembling upon the shaft. The moving buckets consist of special materials which have proved to be the best materials for resisting the corrosive and erosive action of steam. They are forged by a process which imparts a smooth hard surface that has been found to resist the action of water and steam with minimum erosion.

Diaphragms and Guide Vanes

Each diaphragm consists of a cast iron disc supporting the guide vanes. The guide vanes are accurately formed in dies.

Wheel Case

The diaphragms are held in a cast iron wheel case, split horizontally to provide quick access to all working parts of the turbine. The wheel case is supported in such manner that it is free to expand in all directions without changing the position of its axis, so that the center line of the wheel case and the center line of the shaft coincide under all conditions. By reason of this construction the turbine may be started quickly and safely without danger of rubbing, vibration or other troubles due to distortion.

Shaft

The turbine shaft is a steel forging, ground on all surfaces. It is of large size, in order that the critical speed be far higher than the normal running speed of the turbine. This prevents the possibility of vibration of the shaft, in case the wheels should be thrown slightly out of balance due to any cause.

Shaft Packing

To prevent leakage of steam outward or air inward along the shaft, steam sealed carbon ring packings are pro-
[fol. 48] vided. The slight leakage of steam from the high pressure packing is used to seal the low pressure packing of the turbine. Leakage along the shaft from stage to stage is prevented by removable labyrinth packings held by the diaphragms.

Bearings and Pedestals

The bearing shells are of cast iron, lined with high grade babbitt. The babbitt lining is bored and reamed to standard dimensions, and the exteriors of the bearing shells are ground on all contact surfaces to provide for absolute interchangeability. The bearings are split to permit of their removal without disturbing the shaft.

The bearing brackets are of heavy construction scraped to standard lining bars to insure alignment of the shaft and perfect interchangeability of bearing shells. The brackets contain drain oil reservoirs and bearing caps and pedestals are recessed to prevent the seepage of oil through the joints between case and pedestals.

Thrust Bearings

The De Laval multi-stage turbine does not generate axial thrust, as each wheel is surrounded by steam at one pressure and is thus in itself balanced, but in order to maintain the position of the shaft and in order to determine the clearances of the turbine, an adjustable thrust bearing is provided.

Governor and Governor Valve Safety Governor

This proposal includes the main throttle control of the turbine. The unit will also be provided with a safety governor which will automatically prevent the turbine from exceeding a speed ten per cent in excess of normal if overspeeded from any cause, such as the breaking of a propeller shaft, or the lifting of the propeller from the water in heavy seas.

[fol. 49]

Lubrication

The turbines and gears will be designed for forced feed lubrication and suitable oil pumps in duplicate will be furnished to supply the necessary oil at 5 lbs. gage pressure. A strainer and cooler of proper size will be supplied to properly cool the oil required. The purchaser is to supply two oil reservoirs, each of approximately 500 gallons capacity. One of these reservoirs will be elevated to a proper height to give from 3 to 5 lbs. pressure on the turbine and gear bearings. The second tank is to be located in such a position that the oil flowing from the turbine and gear bearings can drain into same. The oil pump supplied under this proposal will be of such size that it will properly remove the oil from the drain tank and elevate same to the overhead gravity tank. The oil piping necessary on the turbine and gear reductions proper will be furnished under this proposal.

Support

It is understood that no bedplate for either turbines or gears is included under these specifications, and the purchaser is to provide rigid steel supports for the proper supporting of the turbine and gear cases. The purchaser

agrees to supply drawings showing the design of the supporting frames for our approval, before final installation.

Flexible Coupling

A De Laval flexible coupling is provided for connecting the turbine to the reduction gears. The couplings can be quickly disconnected which permits the removal of the turbine shaft without disturbing the shaft of the driven turbine. Each coupling disc is fastened to the shaft by means of a taper fit and key, and locked in place by means of a lock nut.

[fol. 50] Equipment, Painting, etc.

There will be furnished with the turbine a complete set of eye bolts for handling the different parts, together with any special wrenches necessary.

All parts of the turbine will be given two coats of filler rubbed smooth, and one coat of the flat paint before shipment, all painting after shipment is to be done by the purchaser.

All supplies, oils, etc., for the proper erection assembling and starting of the turbine are to be furnished by the purchaser.

* * * * * * * *

Specifications for De Laval Double Helical Marine Reduction Gears

Operating Conditions

When operating at normal turbine speed the gear reduction will be so proportioned that the speed of the gear shaft of the second gear reduction will be 90-RPM.

General Description

The gear and pinion are cut in the most accurate possible manner on special machines designed and built by this Company. Each gear, after cutting is tested for correct angle, correct shape of tooth and correct pitch, and no gear is used that is not correct and that does not have an even contact surface for the whole length of every tooth. The

teeth are of such shape to give as closely as possible perfect rolling contact and no scraping, or hand work is permitted, since such hand work would produce imperfect contour of teeth.

After cutting, the gear teeth are carefully polished by a special process which eliminates the small inequalities left by the cutting tool without altering the profile of the teeth.

[fol. 51] Gear Case and Cover

The bottom half of the gear case is a single casting which contains both gear and pinion bearings, holding them in rigid alignment and maintaining the correct spacing between the centers of the gear and pinion, and also preventing any movement which would tend to produce unequal pressure, hammering and vibration that would result in rapid wear of the gear and pinion.

The bearing seats are carefully scraped to standard size to permit perfect interchangeability of bearings.

The bearing caps are separate and any one can be removed without disturbing any other parts.

All parts of the reduction gear that may be disassembled for inspection are furnished with taper dowels to insure correct reassembling, and all working parts are made to standard limit gages and are interchangeable.

The cover is so arranged that it can be removed without disturbing the bearing caps or any other parts.

Bearings

Gear and pinion bearings consists of cast iron shells lined with high grade babbitt and ground on all contact surfaces to standard dimensions to insure exact alignment and perfect interchangeability. They are split to allow of removal without disturbing any part other than the cap. All bearings are provided with oil catchers and all shafts with oil slingers to prevent the creeping of oil along the shafts.

Gears

The gear consists of a cast iron center, on which are shrunk seamless rolled steel bands in which the gear teeth are cut. The gear center is of such shape as to have great strength and be free from distortion by excessive strains

or rapid temperature changes. The gear bands are of special steel heat treated to secure uniform material and proper hardness for the gear teeth. The gear after com- [fol. 52] plete assembling is carefully tested for static and running balance.

The gear shaft is of hammered forged openhearth steel ground on all surfaces to standard dimensions. It is fastened in the gear center by means of a taper fit and key.

Pinion

The pinion is cut directly on the pinion shafts, which is a special steel forging, oil tempered to have a hardness much greater than that of the gear bands, in order to provide different quality of metals in contact with and to secure long life of the pinion. The pinion is ground on all surfaces and carefully tested for static running balances.

Oiling System

The gear and pinion are lubricated by a spray of oil projected against the line of contact of the gear teeth on the entering side, thus insuring ample lubrication.

The gear and pinion bearings are oiled from the pressure system. An oil feed indicator will be provided for all bearings. The oil, after running through the bearings drains into the drain tank provided by the purchaser and can be returned to the main oil tank. The gear case and cover, as well as all bearing caps are provided with recessed oil gro-ves to prevent seepage of oil through the joints.

Flexible Coupling

Flexible couplings will be provided between the first and second gear reductions and one coupling half of a rigid coupling will be supplied on the shaft of the second reduction for connection to the propeller shaft, the coupling half to be mounted on the propeller shaft is to be furnished by the purchaser.

[fol. 53] It is understood that the thrust bearing which will be furnished and installed by the purchaser will be of such design as will permit of no greater movement than

one-eighth inch (⅛") and that this difference will be taken up by the two gear couplings.

Bedplate

No bedplates will be furnished for the gear reductions, it being understood that they are to be supported on steel frames furnished by the purchaser.

Erecting Engineer

The De Laval Steam Turbine Company will furnish the services of a competent erecting engineer to superintend the installation and starting of each set for a period of time not exceeding three weeks per set.

Inspection

The propeller units covered by this proposal will be according to the requirements of Lloyd's Register of Shipping. The fees charged by Lloyds for inspection of the apparatus will be billed as an extra price to the G. M. Standifer Construction Corporation.

[fol. 54] EXHIBIT B-2

U. S. Shipping Board Building, 19 F Street N. W.

United States Shipping Board Emergency Fleet Corporation, Washington

March 1, 1918.

De Laval Steam Turbine Company, Trenton, N. J.

GENTLEMEN: By virtue of an Act of Congress, approved June 15, 1917, and entitled "An Act Making Appropriations to Supply Urgent Deficiencies in Appropriations for the Military and Naval Establishments on account of War Expenses for the Fiscal Year ending June 30, 1917, and for other purposes," and by authority delegated thereunder to the United States Shipping Board Emergency Fleet Corporation by Executive Order of the President dated July 11, 1917, and by virtue of any other powers

granted by law, certain propelling turbines for ships requisitioned or building for the Emergency Fleet Corporation, including materials, appurtenances, and devices pertaining thereto (herein referred to as the "turbine equipments"), and excluding condenser apparatus and other auxiliaries, now under construction by you for the G. M. Standifer Construction Company, Vancouver, Wash., are hereby requisitioned and taken over by the United States; and you are further required to complete the construction and manufacture of the said turbine equipments and to prosecute the work thereunder with all reasonable dispatch. Compliance with this order is mandatory. Upon completion of turbine equipments, shipping directions will be given you.

[fol. 55] The United States will make just compensation for the turbine equipments. In order to determine the amount to be paid thereunder, and to whom such amount shall be paid, you are hereby requested to furnish immediately to the United States Shipping Board Emergency Fleet Corporation copies of all general plans, specifications, contracts, commitments, and other data relative to the turbine equipments, and also to supply full particulars as to the estimated dates of completion, the payments made to date, the amounts unpaid, and any other information that may be pertinent in connection herewith.

Yours very truly, United States Shipping Board Emergency Fleet Corporation, by Frank A. Browne, General Purchasing Officer.

EXHIBIT B-3

(Copy)

March 4, 1918.

United States Shipping Board Emergency Fleet Corporation, Attention General Purchasing Officer, Washington, D. C.

GENTLEMEN: G. M. Standifer Construction Corporation, Vancouver, Washington.

In accordance with your letter of March 1st under the above subject, we are attaching hereto copy of our contract

with the G. M. Standifer Construction Corporation covering ten 3000-HP. propelling turbines, also our drawing E-2757 in duplicate, showing the units to be furnished.

[fol. 56] We have received the first payment of 10% on this contract, but no other payments have been made.

As regards spare parts, we quoted you prices upon the spare parts required for this type and size of unit in our letter of January 18, 1918.

It is our understanding that in taking over these contracts, the United States Shipping Board Emergency Fleet Corporation will make payment of the amounts as specified at the time as specified in the contract.

Very truly yours, De Laval Steam Turbine Company. —— ——, Sales Manager.

HLW. MJD.
Enclosure.

EXHIBIT C-1

Proposal-Contract

De Laval Steam Turbine Company, Trenton, N. J.

Proposal No. 8121. Date: Feb. 23, 1917

[Trade-Mark]

To Turbine Equipment Company for Luckenbach Company, Inc.:

We propose to furnish you f. o. b. cars Trenton, N. J.: Four (4) 2500 shaft horsepower De Laval marine sets, two right hand- and two left handed, each set consisting of one high and one low pressure steam turbine and one reduction gear, all as given in the specifications forming part of this Proposal-Contract. Also all spares, oil pumps, coolers, throttle controls, turning gear, gages, wrenches, tools, etc., as designated herein, the same being the material or machinery described in the specifications hereto [fol. 57] attached and made a part hereof, and subject to the conditions herein stated, for the sum of Two Hundred Sixteen Thousand Dollars ($216,000.00).

Payable in New York exchange, free of expense to us for collection charges.

Terms of payment to be: 10%—30 days after signing of contract; 20% when 50% of the material is on hand at Trenton; 20% on shipment; 30% on installation—which shall be made within 60 days after shipment; the balance of 20% after trial and owner's acceptance—which shall be made within 120 days after shipment.

Shipment to first 2 units 17 months; second 2 units 18 months from February 12, 1917.

It is intended that the machinery is to be free from latent defects in material and workmanship, and should any part of it be found within one year from date of shipment to have been defective at the time furnished we will repair said part f. o. b. our Works, or will furnish without charge f. o. b. our Works a similar part to replace it; provided the original part is returned to our Works, freight prepaid, and our inspection establishes the claim. We will make no allowances for repairs or alterations unless the same are made with our written consent or approval.

The machinery shall be installed by you at your expense unless otherwise expressly stipulated. If we furnish an engineer to superintend for you the erection and starting of any of the machinery you are to pay us for his services at the rate of $9.00 per regular working day and all necessary expenses. Any man we may supply, in any circumstances, shall be understood to be employed by you.

Without relieving you of the obligation to make payment as provided for and without reference to the form of invoice that may be used by us, it is agreed that the title to the machinery or material we furnish remains in us until the full purchase price hereunder (including any modifications or extensions of payment, whether evidenced [fol. 58] by notes or otherwise) shall have been fully paid in cash; and you are to do all acts necessary to perfect and maintain such retention of title in us.

It is understood that the machinery hereunder shall retain its personal character and shall not become a fixture by being placed in any building or in any manner whatsoever annexed to any land. Further, that if said machinery is placed upon mortgaged or encumbered premises, it shall be without prejudice to our retention of title thereto as herein provided.

Fire insurance in an amount sufficient to protect our interest in the material or machinery sold is to be taken out and maintained by you until the same may have been fully paid for, and the policies of insurance are to be made payable to us as our interest may appear at the time of loss; you to assume all loss resulting from fire in event of your not having effected such insurance.

If by your wish a part of the machinery be shipped in advance of the whole proportionate payment shall be made as of such date for such part; and if shipment, or any other act or condition affecting payment for the machinery, or any part thereof, shall be delayed on your account, it is understood that payments shall be due as though shipment had been made and any other act or condition fulfilled. In case of delay in shipment at your instance it is also agreed that charge shall be made for storage and that such storage shall be at your risk.

Delivery to a transporting carrier shall constitute delivery to you, and if the purchase price covers and the delivery specified is other than f. o. b. factory you are to pay freights, charging same to our account.

The delivery, or erection if any, herein specified, is subject to any delay on your part in supplying us with necessary data or any changes in same, as well as to delays due to fires, floods, strikes, accidents or other causes beyond our reasonable control, and in no case shall we be liable for consequential damages. The taking by you of any of the machinery from the transporting carrier shall constitute [fol. 59] a waiver of any claim in respect to delivery.

This proposal is made in duplicate and shall become a contract between us when accepted by you in writing and thereafter approved by an executive officer of this Company. It embodies all the understandings between the parties as to its subject matter and shall not be modified or amended except in writing authoritatively signed by the parties.

This proposal is made for prompt acceptance, conditional upon executive approval as provided for, and the price or prices named are subject to change without notice.

De Laval Steam Turbine Company, by H. G. Watson,
Sales Manager.

Accepted March 6th, 1917.
(Purchaser sign here:) Turbine Equipment Co., H. Y. Haden, Pres.

Trenton, N. J., March 15, 1917.

Approved by

F. W. Kennedy, General Manager.

Shipping Instructions

Mark and ship: ——.

(To be filled in by Purchaser)

[fol. 60] Accompanying Proposal of De Laval Steam Turbine Company to Turbine Equipment Company

Proposal No. 8121. Specification No. —. Date: 2/23/17.
Special Data: ——.

Specifications for De Laval Multi-stage Steam Turbine for Marine Service

These specifications cover four (4) 2500 shaft horsepower De Laval marine turbine sets, two right and two left hand, each set consisting of one high and one low pressure turbine, and one reduction gear. Each unit is to have sufficient nozzle capacity to maintain a maximum load of 2700 shaft horsepower continuously, but it is understood that a greater load than 2500 shaft horsepower will not be put on each unit until the turbines have been in regular service for at least four months. Each high pressure turbine is to be fitted with sufficient hand operated nozzles to shut off 50% of the full load nozzle area.

Each unit will be complete, from the high pressure steam inlet to the exhaust nozzle of the low pressure turbine, and will include all the necessary piping between the high and low pressure turbines. Turbines are to be fitted so that the same may be operated independently in case of necessity.

The high and low pressure turbines to have a total of approximately 26 stages, with at least 2 stages reversed, giving not less than 60% power going astern.

We will furnish throttle control, stop valve for reverse and overspeed stop, the necessary trams and gages for adjustments, and a complete set of wrenches with necessary equipment to facilitate lifting of turbine cases and rotors.

[fol. 61] The following spares will be furnished:

Four (4) turbine bearings;
Two (2) turbine thrust bearings;
Four (4) outside pinion bearings;
Two (2) middle pinion bearings;
Two (2) gear bearings;
Ten (10) turbine buckets for each size required.

In connection with the oiling system, we will furnish the following:

One (1) oil pump with each 2500-HP unit, of sufficient capacity to handle the necessary oil for 2 units.

One (1) oil cooler will be supplied, of sufficient capacity to cool oil for both units in a vessel.

One (1) duplex strainer will be furnished for each vessel, capable of handling all the oil required by both units.

A suitable turning gear, power driven, which will be reversible, is incorporated with each unit; operating motor to be furnished by you.

We will furnish all drawings of parts of the machines which can be made by the purchaser, or made for the purchaser by the ordinary machine shop, but cannot however agree to furnish drawings of such portions as the turbine vanes and similar parts, for the reason that these parts could not be well reproduced except by a firm having the proper knowledge of the special materials required and the experience necessary to do the work in an accurate and particular manner necessary for the successful operation of machinery of this type. We also do not desire to furnish drawings of these parts for the reason that the design is in a great measure our stock in trade and the perfecting of these designs has been accomplished at a heavy expense for experiments, etc.

It is understood that all the apparatus covered by these specifications will be in accordance with the requirements of Lloyd's Register.

[fol. 62] The general details of construction of the apparatus will be in accordance with the following, and it is understood that we will guarantee to reimburse the pur-

chaser at the rate of Two Thousand Dollars ($2,000.00) per pound, or proportionate amount for fraction thereof, should the steam required per shaft horsepower be in excess of that guaranteed. In case the actual steam consumption is less than that guaranteed, the purchaser agrees to pay a like amount for each pound or fraction thereof by which the guarantee is bettered.

Operating Conditions

Steam pressure at throttle—265 lbs.
Quality of steam—130 deg. F. superheat.
Exhaust pressure at turbine outlet—2 inches absolute.
The normal rated capacity of the unit will be 2500 BHP at the normal speed of 2400 RPM.

Steam Consumption

When operating under the conditions specified above, the steam consumption of the turbine will not exceed 9.8 lbs. per shaft horsepower hour.

The turbine speed of 2400 RPM is reduced to the propeller speed of 110 RPM through double helical reduction gears, described in later specifications.

Type

The De Laval marine multi-stage steam turbine is of the pure impulse type, consisting of series of impulse wheels, each running in a separate compartment, the steam pressure being the same on both sides of each wheel, so that it does not generate axial thrust, and the steam economy is in no wise dependent upon the maintenance of small vane clearances. All working parts of the machine are built for limit gages and are strictly interchangeable, and all parts that may have to be disassembled for any reason are furnished with taper dowels to insure correct and easy reassembling. [fol. 63] By reason of this construction, the turbine may be started quickly and safely without danger of rubbing, vibration or other troubles due to distortion.

Shaft

The turbine shaft is a steel forging, ground on all surfaces. It is of large size, in order that the critical speed

be far higher than the normal running speed of the turbine. This prevents the possibility of vibration of the shaft in case the wheels should be thrown slightly out of balance due to any cause.

Shaft Packings

To prevent leakage of steam outward or air inward along the shaft, steam sealed carbon ring packings are provided. The slight leakage of steam from the high pressure packing is used to seal the low pressure packing of the turbine. Leakage along the shaft from stage to stage is prevented by removable labyrinth packings held by the diaphragms.

Bearings and Pedestals

The bearing shells are of cast iron, lined with high grade babbitt. The babbitt lining is bored and reamed to standard dimensions and the exteriors of the bearing shells are ground on all contact surfaces to provide for absolute interchangeability. The bearings are split to permit of their removal without disturbing the shaft.

The bearing brackets are of heavy construction, scraped to standard lining bars to insure alignment of the shaft and perfect interchangeability of bearing shells. The brackets contain ample oil reservoirs and the bearing caps and pedestals are recessed to prevent the seepage of oil through the joints between caps and pedestals.

Thrust Bearing

The De Laval multi-stage turbine does not generate axial thrust, as each wheel is surrounded by steam at one [fol. 64] pressure and is thus in itself balanced, but in order to maintain the position of the shaft and in order to determine the clearances of the turbine, an adjustable thrust bearing is provided.

Governor and Governor Valve—Safety Governor

This turbine includes the main throttle control of the turbine. The unit will be provided with a safety governor. The governor is so adjusted that, should the turbine over-

speed from any cause—such as the breaking of a propeller shaft, or the lifting of the propellers from the water in heavy seas—the safety governor will come in operation and shut the turbine down so that the maximum speed obtainable shall not be more than ten per cent (10%) above the normal operating speed.

Lubrication

The turbines and gears will be designed for forced feed lubrication. A suitable oil pump will be furnished to supply the necessary oil at 10 lbs. gage pressure. The oil piping necessary on the turbine and gear reductions proper will be furnished under this proposal, but you are to furnish all piping between turbines, reservoirs, coolers, etc.

Supports

It is understood that no bedplate for either turbines or gears is included under these specifications, and the purchaser is to provide rigid steel supports for the proper supporting of the turbine and gear cases. The purchaser agrees to supply drawings showing the design of the supporting frames for our approval before final installation.

Flexible Coupling

A flexible coupling is provided for connecting the turbine to the reduction gears. The couplings can be quickly dis- [fol. 65] connected, which permits the removal of the turbine shaft without disturbing the shaft of the driven machine. Each coupling disc is fastened to the shaft by means of a taper fit and key, and locked in place by means of a lock nut.

General

All supplies, oils, etc., for the proper erection, assembling and starting of the turbine are to be furnished by the customer.

Specifications Covering Gear Reduction

Each reduction will consist of a single gear, driven by two pinions—one pinion being driven by a high pressure turbine and the second pinion by a low pressure turbine.

Each unit will transmit 2500 shaft horsepower (1250 each pinion) at 110 R. P. M. of the gear shaft and 2400 R. P. M. of the pinions.

Gear Wheels

Gear wheels to have a pitch diameter of 120 inches, each having 599 teeth. Total width of the teeth face to be 29 inches. Each gear wheel will consist of a cast iron spider, onto which two forged steel rims will be shrunk and secured with grub screws. Onto these rims the gear teeth will be cut. The teeth rims will be of mild steel having a tensile strength of 30 to 35 tons and an elongation of not less than 20% in 2 inches.

Pinions

Each pinion will be 5.4 inches in diameter, having 27 teeth. They will be of nickel steel, made solid with the shaft and coupling. Dimensions of coupling as shown in plan. The material will contain approximately 3½% of nickel and have an elongation of not less than 20% in 2 [fol. 66] inches. Each pinion shaft will have three bearings—the outer bearings to be 5 inches in diameter by 8¾ inches long, and the center bearings (which are arranged between the right and left hand portion of the gearing) to be 5 inches in diameter by 15 inches long.

Gear Shafts

Of mild open hearth forged steel. Each shaft to be a solid forging with the coupling for attaching to the line shafting. Dimensions of coupling to be as shown on plan. The gear will be secured to the shaft by keys and locked by a nut having suitable provision to prevent backing off. Each shaft will have two bearings 14½ inches in diameter by 14½ inches long.

Type of Gearing

The gearing will be of the double helical type, divided in two, with right and left hand teeth; teeth having an angle of approximately 45 degrees.

Gear Case

Gear case will be of cast iron divided along its horizontal center line. The gear wheel and pinion shafts will be supported at each end in brackets arranged on the gear

case; cast iron bushings lined with white metal will be fitted in these brackets.

Forced Lubrication

The gears, the gear shaft bearings and the pinion shaft bearings will be designed for forced lubrication (about 10 lbs. pressure at the bearings).

Oil spray will lubricate the pinions and the gear wheels. The spray will be directed fairly onto the point of contact between the pinion and the gear wheel teeth.

The oiling system, not forming a part of the gear units, will be furnished by the purchaser.

[fol. 67] Workmanship

All material and workmanship used and applied in the construction of the above-mentioned apparatus shall be strictly first-class and high grade in every particular. Each unit must be complete in every detail. Castings will be sound and true to form, and well cleaned of sand and scale. Where bolt holes in permanently fixed parts will be drilled, they will be reamed in place and the bodies of the bolts finished to fit them snugly.

All bearings will be properly channeled for the distribution of oil.

All flanges, collars and offsets will have well rounded fillets.

Prints in triplicate showing overall dimensions and size and location of all holding-down bolts for purpose of designing foundations in ship are to be furnished as quickly as possible.

[fol. 68] EXHIBIT C-3

Order No. 3382. Account No. 2744

Turbine Equipment Co., Engineers, 50 Church St., New York

April 16, 1917.

De Laval Steam Turbine Co., Trenton, New Jersey (Luckenbach Co. Cont. #3):

Please enter our order for the following:

Six (6) pinions to be used as spares, one pinion per boat, four on account of Sun Company, and two on account of Fore River Shipbuilding Co.

Price: $2,400.00.
Terms: Net cash 60 days.
Delivery: ——.
Ship: Ship with respective units.
Via.: ——.

Turbine Equipment Co., per H. Y. Haden

Please put our order number on bill.

[fol. 69] Order No. 3403. Account No. 2761

Turbine Equipment Co., Engineers, 50 Church St., New York

May 5, 1917.

De Laval Steam Turbine Co., Trenton, New Jersey (Luckenbach Co. Cont. #3):

Please enter our order for the following:
Furnish twenty-four (24) spare shoes and two (2) spare thrust collars in connection with above contract for Kingsbury thrust.
Price: $930.00.
Terms: ——.
Delivery: Rush.
Ship to: ——.
Via: ——.

Turbine Equipment Co., per H. Y. Haden.

Please put our order number on bill.

[fol. 70] Order No. 3383. Account No. 2745

Turbine Equipment Co., Engineers, 50 Church St., New York

April 16, 1917.

De Laval Steam Turbine Co., Trenton, N. J. (Luckenbach Co. Contract #3):

Please enter our order for the following:
Four (4) Kingsbury thrust bearings completely installed on the four 2500 H. P. units to be shipped to the Fore River Company; each thrust to be designed and guaranteed to handle a normal thrust of 50,000 lbs. at 110 r. p. m.

Price: $10,800.00.
Terms: Net cash 60 days.
Delivery: Rush.
Ship to: ——.
Via: ——.

Turbine Equipment Co., per H. Y. Haden.

Please put our order number on bill.

[fol. 71] EXHIBIT C-7

U. S. Shipping Board Building, 1319 F Street N. W.

United States Shipping Board Emergency Fleet Corporation, Washington

January 12, 1918.

De Laval Steam Turbine Co., Trenton, N. J.

GENTLEMEN: By virtue of an Act of Congress, approved June 15, 1917, and entitled "An Act Making Appropriations to Supply Urgent Deficiencies in Appropriations for the Military and Naval Establishments on Account of War Expenses for the Fiscal Year ending June 30, 1917, and for Other Purposes," and by authority delegated thereunder to the United States Shipping Board Emergency Fleet Corporation by Executive Order of the President dated July 11, 1917, and by virtue of any other powers granted by law, certain propelling turbines for ships, requisitioned or building for the Emergency Fleet Corporation, including materials, appurtenances, and devices pertaining thereto,) herein referred to as the "turbine equipments"), and excluding condenser apparatus and other auxiliaries, now under construction by you for Luckenbach & Co., Quincy, Mass., are hereby requisitioned and taken over by the United States; and you are further required to complete the construction and manufacture of the said turbine equipment and to prosecute the work thereunder with all reasonable dispatch. Compliance with this order is mandatory. Upon completion of turbine equipments, shipping directions will be given you.

[fol. 72] The United States will make just compensation for the turbine equipments. In order to determine the

amount to be paid thereunder, and to whom such amount shall be paid, you are hereby requested to furnish immediately to the United States Shipping Board Emergency Fleet Corporation copies of all general plans, specifications, contracts, commitments, and other data relative to the turbine equipments, and also to supply full particulars as to the estimated dates of completion, the payments made to date, the amounts unpaid, and any other information that may be pertinent in connection herewith.

Yours very truly, United States Shipping Board Emergency Fleet Corporation, by Frank A. Browne, General Purchasing Officer.

[fol. 73] EXHIBIT D-1

Purchase Order No. P. D. 1779

United States Shipping Board Emergency Fleet Corporation, 140 North Broad St., Philadelphia, Pa.

Purchase Order

Date: April 20, 1918.

To De Laval Steam Turbine Co., Trenton, N. J.:

Please enter our order for the following material subject to all terms and conditions of the back hereof, which form a part of this order.

Ship to —— with turbines. At ——.
Route via ——. For Contract No. — various.
Terms: 30 days net FOB factory. Hull No. —.
Delivery F. O. B. Cars.
Insert Place of Delivery: (——).

[fol. 74]

Quantity	Description	Price	Amount

The spare parts listed below are required for turbines being manufactured by you for various shipbuilders named. (See your letter of January 18, 1918, April 5, 1918, and April 22, 1918.

15 Sets of spare parts for turbines ordered by the Northwest Steel Company for:

	HP	Shaft, RPM	Hull #	Mach. #
J. F. Duthie Co...	2500	90	11	27281
J. F. Duthie Co...	2500	90	14	27282
Willamette I&S Co.	2500	90	8	27283
J. F. Duthie Co...	3000	90	16	29651
J. F. Duthie Co...	3000	90	10	29652
J. F. Duthie Co...	3000	90	20	29653
J. F. Duthie Co...	2500	90	15	27794
Willamette I&S Co.	2550	93	9	27795
J. F. Duthie Co...	2650	93	18	27796
J. F. Duthie Co...	2650	93	19	27797
Willamette I&S Co.	3000	90	10	30398
Col. River S. B. Corp.	3000	90	11	30399
Willamette I&S Co.	3000	90	12	30400
Northwest Steel Co.	3000	90	17	30401
Northwest Steel Co.	3000	90	18	30402

[fol. 75]

Each set of spares shall consist of the following:

2	Turbine bearings	each $254.00	$508.00
1	Turbine thrust bearing	" 228.00	228.00
2	H. S. pinion bearings	265.00	530.00
2	H. S. gear bearings	258.00	516.00
2	L. S. pinion bearings	325.00	650.00
1	L. S. Middle pinion bearing	365.00	365.00
2	L. S. gear bearings	385.00	770.00
10	H. S. coupling bolts with bronze bushings	7.00	70.00
40	Intermediate coupling bolts	4.00	160.00
80	Intermediate coupling bolts rubbers	2.00	160.00
½	Set carbon packing	per set 120.00	60.00
2	Studs and nuts for turbine bearings	1.00	2.00
2	Studs and nuts for H. S. pinion bearings	1.00	2.00
2	Studs and nuts for H. S. gear bearings	1.00	2.00
2	Studs and nuts for L. S. pinion bearings	1.00	2.00
2	Studs and nuts for L. S. gear bearings	1.00	2.00
5	Bolts and nuts for gear case joints	1.00	5.00
5	Bolts and nuts for turbine case joints	1.00	5.00
1	H. S. Pinion	600.00	600.00
1	Emergency governor	75.00	75.00
	Price per set for 1 Turbine		$4,712.00
	Price for 15 sets		$70,680.00

[fol. 76]

Quantity	Description	Price	Amount
4	Sets of spare parts for turbines ordered by the Moore & Scott Iron Works for hulls #125, 126, 127 and 128. This order cancels and supersedes P. D. 465, the spares therein being included in this order.		
	Each set of spares shall consist of the following:		
2	Turbine bearings.....each	$254.00	$508.00
1	Turbine thrust bearing.....	228.00	228.00
2	H. S. pinion bearings.....	265.00	530.00
2	H. S. gear bearings.....	258.00	516.00
2	L. S. gear bearings.....	325.00	650.00
2	L. S. gear bearings.....	385.00	770.00
10	H. S. coupling bolts with bronze bushings....	7.00	70.00
40	Intermediate coupling bolts.....	4.00	160.00
80	Intermediate coupling bolt rubbers.....	2.00	160.00
1	Set carbon packing.....	118.00	118.00
2	Studs and nuts for turbine bearings.....	1.00	2.00
2	Studs and nuts for H. S. pinion bearings....	1.00	2.00
2	Studs and nuts for H. S. gear bearings.....	1.00	2.00
2	Studs and nuts for L. S. pinion bearings....	1.00	2.00
2	Studs and nuts for L. S. gear bearings.....	1.00	2.00
5	Bolts and nuts for gear case joints.....	1.00	5.00
5	Bolts and nuts for turbine case joints.....	1.00	5.00
1	H. S. pinion.....	585.00	585.00
1	Emergency Governor.....	75.00	75.00
1	L. S. Middle pinion bearing.....	365.00	365.00
	Price per set for one turbine.....		$4,755.00
	Price for four sets.....		$19,020.00

[fol. 77]

4	Sets spare parts for turbines ordered by Supple & Ballin. (Your shop Nos. 29865 to 29868.)		
	Each set of spares shall consist of the following:		
2	Turbine bearings.....each	$160.00	320.00
1	Turbine thrust bearing.....	135.00	135.00
2	H. S. outer pinion bearings.....	177.00	354.00
1	H. S. middle pinion bearing.....	270.00	270.00
2	H. S. gear bearings.....	165.00	330.00
2	L. S. pinion bearings.....	288.00	576.00
2	L. S. gear bearings.....	244.00	488.00
6	H. S. Coupling bolts.....	3.00	18.00
6	H. S. coupling bolt bronze bushings.....	2.50	15.00
20	L. S. coupling bolts.....	3.00	60.00
40	L. S. coupling bolt rubbers.....	1.50	60.00
½	Set carbon packing.....per set	105.00	52.50
1	Emergency governor.....	65.00	65.00
1	H. S. pinion.....	490.00	490.00
5	Bolts and nuts for turbine casing.....	1.00	5.00
5	Bolts and nuts for gear casing.....	1.00	5.00
2	Studs and nuts for turbine bearings.....	.90	1.80
2	Studs and nuts for H. S. pinion bearings....	.90	1.80
2	Studs and nuts for H. S. gear bearings.....	.90	1.80
2	Studs and nuts for L. S. pinion bearings....	.90	1.80
2	Studs and nuts for L. S. gear bearings.....	.90	1.80
	Price per set for one turbine.....		$3,252.50
	Price for four sets.....		$13,010.00

[fol. 78]

Quantity	Description	Price	Amount
6	Sets of spare parts for turbines ordered by Pusey & Jones for hulls Nos. 101 to 106 inclusive. (Your Shop Nos. 26634 to 26639 inclusive.) These parts being in addition to the spare parts already ordered by Pusey & Jones, which consist of one-half the number of bearings, one spare pinion and a complete set of carbon packing. These above spares, together with those ordered herein, will be the quota required by Lloyd's.		
	Each set of spares to be purchased on this order shall consist of the following:		
1	Turbine bearing.....each	$160.00	$160.00
1	H. S. Outer pinion bearing.....	177.00	177.00
1	H. S. gear bearing.....	165.00	165.00
1	L. S. pinion bearing.....	288.00	288.00
1	L. S. gear bearing.....	244.00	244.00
20	H. S. coupling bolts.....	3.00	60.00
22	Intermediate coupling bolts.....	7.00	154.00
1	Emergency governor.....	65.00	65.00
	Price per set for one turbine.....		1,313.00
	Price for six (6) sets.....		$7,878.00

[fol. 79]

6	Sets of spare parts for turbines ordered by the Luckenbach Company for Twin screw vessels, Hulls #5, 6, 9, 10, being built by the Sun Shipbuilding Company, and two similar vessels which are to be built by the Fore River Shipbuilding Company.		
	The following spares are included in the purchase price of these turbines and therefore do not appear as part of the order:		
1	Turbine thrust bearing.		
2	Turbine bearings.		
2	Outer pinion bearings.		
1	Middle pinion bearing.		
1	Gear Bearing.		
	Each set of spares to be purchased under this order shall consist of the following:		
2	Turbine bearings.....each	$250.00	500.00
1	L. P. Turbine thrust bearing.....	200.00	200.00
2	Outer pinion bearings.....	195.00	390.00
1	Middle pinion bearing.....	290.00	290.00
1	Gear bearing.....	390.00	390.00
1	Pinion	550.00	390.00
20	Coupling bolts and bronze bushings.....	5.25	550.00
1	Set carbon packing for H. P. turbine.....	120.00	120.00
1	Set carbon packing for L. P. turbine.....	150.00	150.00
1	Emergency governor.....	90.00	90.00
5	Bolts and nuts for gear case.....	1.00	5.00
5	Bolts and nuts for turbine case.....	1.00	5.00
2	Studs and nuts for H. P. turbine bearings..	1.00	2.00
2	Studs and nuts for L. P. turbine bearings....	1.00	2.00
	Price per set of 1 turbine.....		$2,803.00
	Price for six sets.....		$16,818.00

[fol. 80]

Quantity	Description	Price	Amount
10	Sets of spare parts for the 3000 H. P. units originally ordered by G. M. Standifer Construction Corporation.		
	Each set of spares shall consist of the following:		
2	Turbine bearings.....each	$254.00	$508.00
1	Turbine thrust bearing.....	228.00	228.00
2	H. S. pinion bearings.....	265.00	530.00
2	H. S. gear bearing.....	258.00	516.00
2	L. S. pinion bearings.....	325.00	650.00
1	L. S. middle pinion bearing.....	365.00	365.00
2	L. S. gear bearings.....	385.00	770.00
10	H. S. coupling bolts with bronze bushings....	7.00	70.00
40	Intermediate coupling bolts.....	4.00	160.00
80	Intermediate coupling bolt rubbers.....	2.00	160.00
½	Set carbon packing.....per set	120.00	60.00
2	Studs and nuts for turbine bearings.....	1.00	2.00
2	Studs and nuts for H. S. pinion bearings....	1.00	2.00
2	Studs and nuts for H. S. gear bearings.....	1.00	2.00
2	Studs and nuts for L. S. pinion bearings....	1.00	2.00
2	Studs and nuts for L. S. gear bearings.....	1.00	2.00
5	Bolts and nuts for gear case joints.....	1.00	5.00
5	Bolts and nuts for turbine case joints.....	1.00	5.00
1	H. S. pinion.....	600.00	600.00
1	Emergency governor.....	75.00	75.00
	Price per set one turbine.....		$4,712.00
	" for 10 sets.....		$47,120.00
	Grand total of this order.....		$174,526.00

Price: As per your letters quotation of January 18, 1918, April 5, 1918, and April 12, 1918.

Specifications: All spare parts shall be complete, and each spare shall be an exact duplicate of the part in the turbine for which it is intended.

[fol. 81] Packing: All spare parts shall be carefully and securely packed in strong boxes or crates. All breakable material shall be well protected against breakage or damage due to rough handling in transit.

Each crate or box shall have stenciled on its exterior, the names or name of the articles within the above P. D. number, the serial number of the turbines to which it or they belong, and all other data required in checking up shipment.

Storage: The manufacturer is to be ready to make deliveries as specified above. The manufacturer, however, at the request of the purchaser, and at the manufacturer's sole expense, shall store any or all equipment herein ordered,

and whenever instructed by the purchaser shall deliver the same FOB cars and shall consign and make shipment to points directed by the purchaser. Payment for equipment thus required by the purchaser to be stored shall be made at the time storage is ordered.

Acknowledgment: Kindly acknowledge promptly the receipt and acceptance of this order.

Render invoice against U. S. Shipping Board Emergency Fleet Corporation.

United States Shipping Board Emergency Fleet Corporation, by F. A. Browne, General Purchasing Officer.

Invoices must be rendered in quadruplicate in accordance with instructions on invoice forms. Mail one copy of shipping notice to General Purchasing Officer on same day shipment is made.

[fol. 82] Terms and Conditions of Order

1. The parties to this agreement are the United States Shipping Board Emergency Fleet Corporation, hereinafter called the Owner, and the party from whom the articles are ordered, hereinafter called the Contractor. The items ordered as listed on the reverse side hereof are hereinafter called the Articles.

2. This order is placed with the Contractor by the Owner acting under the powers conferred upon the Owner by the Urgent Deficiencies Act, approved June 15, 1917, and the President's Executive Order of July 11, 1917.

3. Material and workmanship shall be first class in every particular. Articles must be manufactured according to the rules and regulations of the American Bureau of Shipping and/or Lloyds and/or United States Steamboat Inspection Service, unless otherwise specified, wherever they apply and shall be subject at all times to inspection as to material and workmanship and final acceptance by the American Bureau of Shipping and/or Lloyds and/or United States Steamboat Inspection Service and by the Owner. Inspectors shall be given every facility to enable them to perform their duties. Any physical or chemical tests of material entering into the construction and/or any

plant tests required by the rules of the American Bureau of Shipping and/or Lloyds and/or United States Steamboat Inspection Service and/or by the Owner shall be made at the expense of the Contractor and in the presence of the Inspectors. No inspector's certificate given or statement made shall be conclusive evidence of the performance of this contract by the Contractor either in whole or in part and no payment shall be considered as an acceptance of improper workmanship or defective material.

4. The Owner shall have the right at any time by orders in writing to make such reasonable alterations, omissions, [fol. 83] additions or substitutions not materially affecting the general design of the Article as the Owner may deem necessary. The Contractor agrees to concede to and carry the same into effect. If, by reason thereof, the cost of construction of the Articles shall be increased or decreased, then the price to be paid by the Owner shall be increased or decreased by an amount to be determined by the Vice-President of the Owner.

5. If the Contractor be delayed or obstructed in the completion of the Articles herein ordered by the delay or default of the Owner, or by reason of alterations or additions made, or the commandeering of materials purchased for use in connection with the Articles, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection or acts of war, or for any cause beyond the reasonable control of Contractor, and the Contractor shall notify the Owner, in writing, within five days of the happening of such contingency, then the time of the delivery of the Articles affected thereby shall be extended for a period equivalent to the time lost by reason thereof.

6. The Contractor shall maintain reasonable storage facilities for the Articles and shall at its own expense, whenever requested by the Owner store any or all of the Articles. If it shall be necessary to store Articles in excess of the facilities of the Contractor the Owner shall pay reasonable compensation therefor.

7. The Contractor shall at its own expense promptly repair or replace any damage to the Articles resulting from any trial or test provided for in this contract due to faulty workmanship or faulty material used in the Articles and

shall repair or replace at its own expense any of the Articles which do not pass trials satisfactory to the Owner.

8. Each Article shall be properly dismantled and packed for storage and shipment, (all small parts being boxed) and loaded on cars consigned to such points as may be desig- [fol. 84] nated by the Owner. The Contractor will, at its own expense, promptly repair any damage to and replace any Article lost in transit because of failure to comply with this Section. The Contractor agrees to mark all packages and render all invoices, B/L and packing lists in accordance with instructions from the Owner.

9. The title to all the Articles either complete or under construction, together with the materials therefor, in so far as they have been inspected and approved shall be in the United States of America. Nothing contained in this Section, however, shall be construed as an acceptance of any of the Articles which fail to fulfill the requirements of this Contract.

10. The Articles shall be delivered to the Owner free from any lien or encumbrance. In the event of the filing or attaching of any lien or encumbrance against any of the Articles or material therefor, the Owner may satisfy the same out of any money due or to become due the Contractor, withholding the amount thereof from any payment due or to become due. If the amount due or to become due Contractor is not sufficient therefor, Owner may, at its option, pay the excess, which excess amount shall be immediately refunded to Owner by Contractor.

11. The Contractor shall hold the Owner harmless in the use of any one or more of said Articles against any claim for damage due to an alleged or actual violation of any patent rights, whatsoever, and shall upon demand, indemnify the Owner against all losses or damages incurred in connection therewith.

12. Neither this contract or any interest thereunder shall be assigned by the Contractor without the written consent of the Owner.

13. The Contractor will comply with all instructions as to wages and conditions of employment of labor on this contract given to it in writing by the Owner. If by reason of

[fol. 85] any such instructions the cost of the Articles shall be increased or decreased, then the sum to be paid by the Owner to the Contractor as herein provided shall be increased or decreased by such amounts.

14. If the Contractor shall fail to carry out the provisions of this order or shall fail to make progress on the work satisfactory to the Owner, the Owner may declare this contract forfeited and at its option enter into and take possession of the plant and the articles and all material and appliances in connection with the construction thereof and complete the same in whole or in part, charging the cost thereof against the Contractor.

15. The Contractor agrees to hold the Owner harmless from all claims arising from accidents or casualties, to the public or its employees or workmen on or about the work covered by this order.

16. The Contractor expressly warrants that he has employed no third person to solicit or obtain this contract in his behalf or to cause or to procure the same to be obtained upon compensation in any way contingent in whole or in part upon such procurement and that he has not paid or promised, or agreed to pay any third persons in consideration of such procurement, or for compensation for service in connection therewith, any brokerage, commission or percentage upon the amount receivable by him hereunder, and that all monies payable to him hereunder are free from obligation to any other persons for services rendered or supposed to have been rendered for the procurement of this contract. The Contractor further agrees that any breach of this warranty shall constitute adequate cause for the annulment of this order by the Owner and that the Owner may retain to its own use from any sums due or to became due thereunder, an amount equal to any brokerage, commission or percentage so paid or agreed to be paid.

[fol. 86] 17. It is recognized, in view of war conditions, that it may become necessary for the United States to exercise complete control over the manner and priority in which materials, supplies and equipment necessary for the work hereunder are obtained by, or furnished to, the Contractor. It is agreed between the parties hereto that if required by the Owner and/or the United States, the Con-

tractor will promptly submit to the Owner and/or the United States a classified schedule of the Contractor's requirements for all materials, supplies and equipment to be used under this contract and copies of any or all contracts, agreements or orders for such materials, supplies or equipment, and the Contractor hereby agrees that it will promptly comply with, and be bound by, any and all instructions issued by the Owner and/or the United States with respect to such contracts, agreements or orders for materials, supplies and equipment.

18. Time is of the essence of this contract.

(NOTE.—The above Terms and Conditions are printed in full on the back of each sheet numbered 4, 5, 6 and 7 of the original P. D. 1779—Exhibit D-1.)

[fol. 87] EXHIBIT D-2

Form 397—E. F. C.

United States Shipping Board Emergency Fleet Corporation, 140 N. Broad Street, Philadelphia, Pa.

Memorandum of Change in Purchase Order No. 4350-E

Date: March 31, 1919.

To De Laval Steam Turbine Co., Trenton, New Jersey:

Referring to our Purchase Order No. P. D.—1779, dated 4-20-18,

Please note the following instructions:

Confirming verbal instructions given you several months ago by the Engineering Section you are to cancel the spare Emergency governors included in this order for all turbine equipments with which they have not already been shipped, the exact number of spare governors to be omitted being as follows:

10 governors for turbines, 29651, 29652, 29653, 27796, 27797, 30398, 30399, 30400, 30401, and 30402 originally purchased by Northwest Steel Co.

Allowance at $75.00 each $750.00

4 governors for turbines 30342, 30343, 30344 and 30345 originally purchased by Moore and Scott Iron Works.

Allowance at $75.00 each	$300.00

4 governors for turbines 29865, 29866, 29867, 29868 originally purchased by Supple & Ballin.

Allowance at $65.00 each	260.00

[fol. 88] 6 governors for turbines 26634, 26635, 26636, 26637, 26638, and 26639 originally ordered by Pusey and Jones, Wilmington.

Allowance at $65.00 each	390.00

6 governors for turbines 27288-9, 27290-1, 28285-6, 28287-8, 28754-5, and 28756-7 originally ordered by the Luckenbach Steamship Co.

Allowance at $90.00 each	540.00

10 governors for turbines 32214, 32215, 32216, 32217, 32218, 32219, 32220, 32221, 32222 and 32223 originally purchased by the G. M. Standifer Corp.

Allowance at $75.00 each	750.00
Total deduction from total price of order P. D. 1779 for omission of 40 governors, as above	$2,290.00

Prices: As specified in P. D. order.

Note.—This does not supersede or change any suspension orders that have and/or may be issued before and after date of this Memorandum of Change.

These instructions supersede all prior agreements in so far as they affect changes herein specified.

Manufacturers and contractors will acknowledge receipt and acceptance without reservation or modification.

Changes approved.

United States Shipping Board Emergency Fleet Corporation. E. A. Rebbeke, General Purchasing Officer.

Acknowledgment: Kindly acknowledge promptly the receipt and acceptance of this Memorandum of Change. Un-

less acceptance is made on regular forms, payment cannot be obtained.

[fol. 89] EXHIBIT E

Supplemental Agreement Affecting De Laval Steam Turbine Company

Contracts Nos. 5006, 5012, and 5013 and E. F. C. Purchase Order No. 1779 to De Laval Steam Turbine Company—Cancellation—Adjustment

Agreement entered into this 2nd day of June, 1920, between De Laval Steam Turbine Company, a corporation organized and existing under the laws of the State of New Jersey, doing business at Trenton, New Jersey (herein called "Contractor"), party of the first part, and the United States Shipping Board Emergency Fleet Corporation, a corporation organized and existing under the laws of the District of Columbia (herein called "Owner"), acting for and on behalf of the United States of America (herein called "United States"), party of the second part: Witnesseth that:

Whereas, prior to the 12th day of January, 1918, the Contractor and various Shipbuilders entered into certain contracts, to wit: Contracts Nos. 5006, 5012 and 5013, (herein called "Original Contracts"), providing for the manufacture and delivery by the Contractor to said shipbuilders of complete units and spare parts of turbine equipment, at prices and upon terms and conditions as specified in said Original Contracts; and

Whereas, on the 12th day of January, 1918, the Owner, acting in accordance with the provisions of the "Urgent Deficiency Act" of June 15, 1917, and the President's Executive Order of July 11, 1917, duly requisitioned said Original Contracts and the material to be delivered thereunder and ordered the Contractor to complete same on behalf of the United States; and

[fol. 90] Whereas, the said "Urgent Deficiency Act" provides that just compensation be paid to the parties from whom said Original Contracts were so requisitioned; and

Whereas, on the 20th day of May, 1918, the Owner issued to the Contractor a certain Purchase Order, P. D.

No. 1779 (herein called "Purchase Order"), providing for the manufacture and delivery of spare parts for the turbines under the requisitioned Original Contracts, in quantities and at prices as specified in said Purchase Order; and

Whereas, the Owner, by its Memorandum of Change issued on the 31st day of March, 1919, to the Contractor, modified said Purchase Order, as indicated in said Memorandum of Change; and

Whereas, on account of the general curtailment of the Owner's program of ship construction subsequent to the signing of the Armistice, it became necessary, in the public interest, to suspend operations under certain contracts with various Shipbuilders, the holders of the hereinabove referred to Original Coitracts being among that number; and

Whereas, on account of the suspensions under the vessel construction contracts, it was desirable in the public interest to suspend operations under the Original Contracts and to that end, the Contractor, at the request of the Owner, on the 4th day of January, 1919, suspended operations under said Original Contracts Nos. 5012 and 5013, and on the 11th day of April, 1919, suspended operations under said Original Contract No. 5006; and

Whereas, it was desirable in the public interest to suspend operations under said Purchase Order and to that end, the Contractor, at the request of the Owner, on the 4th day of January, 1919, suspended operations thereunder; and

[fol. 91] Whereas, the Original Contracts and the Purchase Order have not been completely performed but in preparation therefor and as part of complete performance, the Contractor has properly employed capital, made expenditures and incurred obligations and liabilities, including work, labor and services necessarily rendered in connection therewith; and

Whereas, the Owner, on the 19th day of May, 1920, awarded to the Contractor in full settlement of claims which Contractor had heretofore presented to Owner on account of said Original Contracts and the Purchase Order, and the suspension and cancelation thereof the sum of Eighty-eight Thousand Seven Hundred Twenty-three Dollars and Sixty-three Cents ($88,723.63); and

Whereas, the Contractor is unwilling to accept said award, and desires to bring suit against the Owner in the Court of Claims to recover such amount as said Court may award to it as just compensation under said Original Contracts and said Purchase Order; and

Whereas, pending the institution and final determination of such suit against the Owner in said Court, the Contractor has requested that the Owner advance to it the sum of Sixty-six Thousand Five Hundred Forty-two Dollars and Seventy-two Cents ($66,542.72) said sum representing seventy-five per centum (75%) of the amount heretofore awarded by the Owner to the Contractor, as aforesaid;

Now, therefore, in consideration of the premises and of the mutual covenants of the parties herein contained, it is agreed as follows:

Article I

The owner shall forthwith pay to the Contractor the sum of Sixty-six Thousand Five Hundred Forty-two Dollars and Seventy-two Cents ($66,542.72).

[fol. 92]

Article II

The parties hereto have heretofore agreed that the salvage value of the materials heretofore assembled and on hand at the Contractor's plant at the rates of suspensions of the Original Contracts and Purchase Order is the sum of Twenty Thousand One Hundred Forty-nine Dollars and Eighty-eight Cents ($20,149.88).

Article III

All disbursements, settlements or adjustments made under or growing out of said Original Contracts and said Purchase Order, or any supplement thereto, or of this agreement, shall be subject to such audit or audits as may be determined by the General Comptroller of the Owner, which audit or audits, however, must be begun within two years from the date hereof; and all books, accounts, records, agreements, documents or other data which, in the opinion of such General Comptroller, may be necessary for said audit or audits, shall be at his disposal or that of his duly authorized representative. Any omissions, ir-

regularities or discrepancies prejudicial to the interests of the Owner, disclosed by any such future audit, shall be subject to adjustment.

Article IV

The Contractor hereby expressly reserves unto itelf the right to prosecute against the Owner and the United States in the United States Court of Claims suit to recover from the Owner of such sum as, added to the amount advanced to the Contractor hereunder, will represent just compensation to the Contractor on account of the suspension and cancelation of said Original Contracts and said Purchase Order.

[On margin:] Approve here.

[fol. 93] Article V

The Contractor agrees to execute and deliver to the Owner all papers, instruments and certificates which the Owner may deem necessary to effectuate the intent of this agreement.

Article VI

This agreement shall be executed in triplicate and the respective copies shall be known as Parts I, II and III. Parts I and III shall be delivered to the Owner and Part II shall be delivered to the Contractor. Said respective parts shall be of equal legal force and effect for any and all purposes.

In witness whereof the parties hereto have caused this agreement to be signed by their respective officers, thereto duly authorized, and their corporate seals to be hereunto affixed, duly attested, on the day and year first above written.

De Laval Steam Turbine Company, by F. J. Arend, President. Attest: Ralph Stoddard, Secretary. (Seal.) Countersigned: Walter H. Foster, a Director. United States Shipping Board Emergency Fleet Corporation, by W. S. Benson, President. Attest: John J. Flaherty, Secretary. (Seal.)

[fol. 94] Approved as to Form.
Guy D. Goff, General Counsel.

Approved by
James Talbert, Chairman Construction Claims Board.

Noted as to financial obligations involved.
Tilden Adamson, A. S. M., Assistant to the General Comptroller.

Approved as to Form.
Geo. C. Cravey, Assistant Counsel.

B. H.
M. S.

[fol. 95] III. Notation of No Answer Being Filed

No demurrer, plea, answer or notice of a counterclaim, set-off, claim for damages or demand in the premises has been filed by the defendant to the plaintiff's amended petition.

IV. Argument and Submission of Case

On December 17 and 18, 1929, this case was argued and submitted on merits by Mr. Jesse C. Adkins, for plaintiff, and by Mr. Arthur Cobb, for defendant.

[fol. 96] IV. Further History of Proceedings

On April 30, 1930, the Court filed special findings of fact, conclusion of law, and entered judgment in favor of plaintiff, with an opinion by Green, J.

On May 20, 1930, the plaintiff filed a request for special findings of fact under Rule 57.

On June 24, 1930, on motion of Jesse C. Adkins, Esq., attorney of record, John S. Flannery, Esq., was substituted as attorney of record.

On June 20, 1930, the plaintiff presented for filing a motion for new trial. On June 24, 1930, the court allowed

the motion for new trial to be filed, and same was filed on June 24, 1930.

On November 3, 1930, the Court entered the following order amending the special findings of fact, etc.:

[fol. 97] V. Order Amending the Special Findings of Fact—Filed November 3, 1930

Order

It is hereby ordered that the Special Findings of Fact in the above-entitled case be amended by adding to Finding 2 the following:

"A copy of the Standifer contract is attached to the petition and marked 'Exhibit B-1'; copies of the Turbine Equipment-Luckenbach contracts are attached to the petition and marked 'Exhibit C-1' and 'Exhibit C-3'; and a copy of the Supple & Ballin contract is attached to the petition and marked 'Exhibit A-1'. These contracts are made part of this findings by reference to said exhibits."

It is further ordered that Finding 10 be amended by striking out the second paragraph and inserting in lieu thereof the following:

"As alleged in the petition, plaintiff completed and delivered to defendant certain of said turbine equipment under the said Standifer contract, and was paid therefor the sum of $78,220 'in accordance with said Standifer contract'. This sum was paid in the following manner: The Fleet Corporation paid plaintiff $1,700 on account of two pumps having been completed and delivered to it by plaintiff on the Standifer contract; also paid plaintiff, in three installments, $64,620 on account of a geared marine turbine having been completed and delivered under the Standifer contract; and $11,900 on account of fourteen other pumps having been completed and delivered under the Standifer contract."

The Special Findings of Fact heretofore entered are otherwise reaffirmed, and the motion of plaintiff for Special [fol. 98] Findings of Fact under Rule 57 is otherwise over-

ruled. The motion of plaintiff for new trial is also overruled.

By the Court.

[fol. 99] **VI. Special Findings of Fact (as Amended by Order of Court of November 3, 1930), Conclusion of Law, and Opinion of the Court by Green, J.**

Mr. Jesse C. Adkins for plaintiff. Mr. George C. Holton was on the briefs.

Mr. Arthur Cobb, with whom was Mr. Assistant Attorney General Herman J. Galloway, for defendant.

This case having been heard by the Court of Claims, the court, upon the evidence adduced, makes the following

SPECIAL FINDINGS OF FACT

1. The plaintiff, De Laval Steam Turbine Company, is, and at all times mentioned in the findings of fact was a corporation engaged in the business, among other things, of manufacturing marine steam turbines and reduction gears and spare parts therefor.

2. Prior to January 12, 1918, the plaintiff had entered into thirteen written contracts with certain firms and corporations for the manufacture by it of certain steam-turbine propulsion units for ships. All of these contracts were taken over by the Government in the manner hereinafter set forth, but there is no controversy except as to three of them, which are set out below, showing the Government number thereof, the corporations with whom the contracts were made, the payments which had been made thereon before the Government took the contracts over, and the contract price.

U. S. S. B., E. F. C. contract number		Payment on account	Contract price
5006	G. M. Standifer Construction Corporation	$73,500	$735,000
5012	Turbine Equipment Company —Luckenbach	68,559	216,000
5013	Supple & Ballin	15,000	150,000

All of these contracts were for the construction of certain turbine equipment for ships not necessary to be herein described.

"A copy of the Standifer contract is attached to the petition and marked 'Exhibit B-1'; copies of the Turbine Equipment-Luckenbach contracts are attached to the petition and marked 'Exhibit C-1' and 'Exhibit C-3'; and a copy of the Supple & Ballin contract is attached to the petition and marked 'Exhibit A-1'. These contracts are made part of this finding by reference to said exhibits."

3. Thereafter, and at the time of the receipt by plaintiff, as hereinafter set forth, of notice that the defendant had requisitioned and taken over the said contracts referred to in finding 2, the plaintiff was engaged in the performance [fol. 100] of these contracts, had provided itself with materials, equipment, and labor to perform said contracts, had partly performed the same, and was ready, able, and willing to complete such performance.

4. In the early part of the year 1918, and after plaintiff had commenced work on these contracts, the United States Shipping Board Emergency Fleet Corporation served upon plaintiff a notice and order of requisition with reference to each of the three contracts above mentioned, and by letter signed by one of its officials separately advised plaintiff and the several parties with whom these contracts had been made that the several contracts had been requisitioned by the Government, and that the United States would make just compensation for the turbine equipment which the plaintiff was required to complete, and further advised the plaintiff that the Emergency Fleet Corporation assumed the responsibility of these contracts and would make payment to plaintiff, and in several letters with reference to these contracts stated both that the Government had requisitioned the contracts and that it had requisitioned the turbines.

5. About April 20, 1918, the Fleet Corporation agreed to purchase from plaintiff and plaintiff agreed to sell to it certain spare parts for turbine equipments constructed or being constructed by plaintiff under the contracts mentioned in finding 2. This contract was subsequently modified by eliminating therefrom certain spare parts and the contract

as amended was referred to as P. D. 1779. On June 2, 1920, the plaintiff and the Fleet Corporation entered into a written agreement wherein it was stated with reference to contracts 5006, 5012, and 5013 (called original contracts) that the Fleet Corporation had "duly requisitioned said original contracts and the material to be delivered thereunder and ordered the contractor (plaintiff) to complete same on behalf of the United States"; also that the Fleet Corporation had issued a certain purchase order, P. D. 1779, providing for the manufacture and delivery of spare parts, and that on account of the general curtailment of the Fleet Corporation's "program of ship construction subsequent to the signing of the armistice," it became necessary, in the public interest, to suspend operations under said contracts and purchase order, and that upon the request of the Fleet Corporation the plaintiff had suspended operations thereon and thereunder, also that while "the original contracts and the purchase order have not been completely performed but in preparation therefor and as part of complete performance, the contractor has properly employed capital, made expenditures and incurred obligations and liabilities, including work, labor, and services necessarily rendered in connection therewith."

The agreement further stated that the Fleet Corporation had awarded to plaintiff on account of the original contracts and purchase order, and the suspension and cancellation thereof $88,723.63, and the contractor being unwilling to accept the award was to be paid seventy-five per cent thereof, or $66,542.72. This amount was paid plaintiff August 17, 1920, and plaintiff reserved the right to bring suit for the amount which it claimed was due.

6. From time to time before orders were finally given to stop all work on the contracts, at the request of defendant certain modifications were made therein and complied with [fol. 101] by plaintiff, and in particular with reference to the contract P. D. 1779. The Fleet Corporation failed to carry out its contract with reference to certain spare parts for turbine equipment specified in the Standifer contract and as to spare parts for the turbine equipment specified in the Supple & Ballin and Turbine Equipment-Luckenbach contracts. This failure was due to the curtailment of the Fleet Corporation's program of ship construction subse-

quent to the signing of the armistice. At all times plaintiff was ready, willing, and able to complete the contracts as provided in the original agreements.

7. The turbines, reduction gears, and spare parts specified in the contracts in controversy herein were of a special type and design requiring special skill and experience, together with trained employees and a specially designed plant, equipment, and facilities for the manufacture thereof. At the time the contracts were requisitioned the demand for such machinery was greater than the supply, and the price for all materials purchased by the plaintiff for the contracts had increased over the prices paid by plaintiff for the same.

All of the materials acquired and assembled by the plaintiff at its plant for the performance of these contracts were subject to the control of the Fleet Corporation, and much of the materials for the machinery manufacture were large and cumbersome. On receipt of the orders to stop work these parts were placed by plaintiff wherever they could be in its machine shop and casting yard, storing the same in the best possible manner under the circumstances.

The Fleet Corporation failed from the time of said orders to stop work until January 14, 1920, to release said materials from the effect of said requisition orders, or to inform plaintiff whether it would require the delivery thereof, or agree with plaintiff as to what should be done with the same.

The expenses and costs necessarily incurred by plaintiff in handling, caring for, and storing said materials for said Supple & Ballin, Standifer, and Turbine Equipment-Luckenbach contracts, and the reasonable value of plaintiff's space occupied by said materials during the period from said orders to stop work until January 14, 1920, are $15,000.00, apportioned to the three contracts, as follows:

Supple & Ballin contract	$2,025.00
Standifer contract	7,950.00
Turbine Equipment-Luckenbach contract	5,025.00

8. While plaintiff was engaged in providing material and carrying on the work necessary to complete the contracts hereinabove referred to, including the contract called P. D. 1779, the defendant notified plaintiff to stop work thereon, which it accordingly did. Defendant paid plaintiff for such

work as had been performed on the contracts, and it was later agreed between the plaintiff and the Fleet Corporation that plaintiff should take over the materials acquired and on hand at its plant for the performance of said contracts at a salvage value on the Supple & Ballin contract of $3,011.88, on the Standifer contract of $10,684.15, on the Turbine Equipment-Luckenbach contract of $5,612.32, and on P. D. 1779 of $841.53, making a total of $20,149.88 for which the Fleet Corporation took credit.

[fol: 102] 9. Plaintiff's actual costs and expenditures incurred in and about performance of the Supple & Ballin contract up to the time defendant directed it to stop work thereon were $45,918.73. At the time of said order to stop work, plaintiff could have completed performance of said Supple & Ballin contract at a further cost of $66,122.45, or a total cost of $112,041.18, to fully perform said contract, and would have made profits of $37,959.16 by fully performing said contract.

10. Plaintiff's actual costs and expenditures incurred in and about performance of the Standifer contract up to the times defendant directed it to stop work thereon were $169,772.74 with respect to the nine turbines on which work was stopped pursuant to said orders. At the time of said orders to stop work, plaintiff could have completed performance of said Standifer contract at a total cost (including said $169,772.74) of $416,234.50, and would have made profits thereby of $318,765.50. The cost to plaintiff of the one turbine and fourteen other pumps manufactured and delivered to defendant under the Standifer contract was $53,782.03.

"As alleged in the petition, plaintiff completed and delivered to defendant certain of said turbine equipment under the said Standifer contract, and was paid therefor the sum of $78,220 'in accordance with said Standifer contract'. This sum was paid in the following manner: The Fleet Corporation paid plaintiff $1,700 on account of two pumps having been completed and delivered to it by plaintiff on the Standifer contract; also paid plaintiff, in three installments, $64,620 on account of a geared marine turbine having been completed and delivered under the Standifer contract; and $11,900 on account of fourteen other pumps having been completed and delivered under the Standifer contract."

11. Plaintiff's actual costs and expenditures incurred in and about performance of the Turbine Equipment-Luckenbach contract up to the time defendant directed it to stop work thereon were $73,008.16. At the time of said order to stop work, plaintiff could have completed performance of said Turbine Equipment-Luckenbach contract at a further cost of $141,582.69, or a total cost of $214,590.85 to fully perform said contract, and would have made profits of $13,939.15 by fully performing said contract.

12. On February 19, 1919, defendant directed the plaintiff to stop work on the contract called P. D. 1779. Plaintiff's actual costs and expenditures incurred in and about performance of P. D. 1779 up to the times defendant directed it to stop work thereon were $9,029, exclusive of the cost of a set of spare parts delivered to and paid for by the Fleet Corporation. At the time of said orders to stop work, plaintiff could have completed performance of that part of P. D. 1779 upon which work was ordered stopped, as aforesaid, at a further cost of $16,586.22, or a total cost of $25,615.22 to fully perform said contract, and would have made profits of $33,193,78 by fully performing that part of said contract.

[fol. 103] 13. Plaintiff's turbines and gears were the result of several years' development and experimental work, and each was designed to meet particular conditions and was a separate engineering problem.

Under the Supple & Ballin, Standifer, and Turbine Equipment-Luckenbach contracts plaintiff was obligated to manufacture and deliver its special type and design of turbines and reduction gears, and was to manufacture them by means of the employment of the special designs, skill, and experience of plaintiff and its trained employees, and its specially designed plant, equipment, and facilities for the performance of such contracts; these contracts required that the gears and pinions be cut on special machines designed and built by plaintiff, and these gear-cutting machines embodied special design, which was a secret of plaintiff; and such contracts and obligations by their very terms and nature were not assignable by plaintiff.

Likewise, the materials ordered by plaintiff at the times of requisition for said contracts were special, consisting principally of castings and forgings of special sizes, de-

sign, and character, cast or forged for use in building the particular De Laval turbines and gears specified in these contracts and suited and of value for that purpose only.

At the time of the requisitioning of these contracts the turbine situation was abnormal; the market price for turbines was in excess of the prices fixed in plaintiff's contracts which were requisitioned, and the prices for all materials purchased by plaintiff for those contracts had increased over the prices paid by plaintiff for those materials. The demand for turbine machinery was greater than the supply. There was a shortage of propelling equipment for ships being built by the Fleet Corporation. Shipbuilders generally wanted turbines instead of engines.

For these reasons the interests, rights, and obligations of manufacturers under contracts of this character were not at any time bought or sold on the market, and there was not at any time a market value for plaintiff's interests, rights, and obligations under the Supple & Ballin, Standifer, and Turbine Equipment-Luckenbach contracts.

14. An order of January 2, 1919, directed plaintiff to stop work on the eight turbines being constructed under the Supple & Ballin and Turbine Equipment-Luckenbach contracts. On February 3, 1919, the Fleet Corporation gave plaintiff a new schedule of the order in which it wished the remaining turbines on the uncompleted contracts to be completed and delivered. The schedule made drastic changes in the order of deliveries; it postponed the time of delivery of four turbines from the dates given on the last preceding schedule; it restored six turbines on earlier schedules but omitted from the preceding one, and for the first time fixed the dates at which the Fleet Corporation desired delivery of the ten turbines called for by the Standifer contract.

On February 19, 1919, defendant directed plaintiff to stop work on four of said Standifer turbines, but to proceed on the remaining six; on April 14, 1919, the Fleet Corporation directed plaintiff to stop work on five more of said Standifer turbines, but to proceed on the tenth.

These orders to stop work on the requisitioned contracts and the changes made by the schedule of February 3, 1919, caused plaintiff to perform an unusual amount of clerical work in connection with its shop-scheduling system, which

was costly and would not have been necessary but for defendant's failure to perform said contracts. They also disarranged and upset plaintiff's program of manufacture. At the receipt of the order of April 14, with respect to the Standifer contract, some of the parts for the turbines thereunder were being machined on the machine tools, and it was necessary to take them off the tools without completion. As to all the contracts, plaintiff had all the drawings, jigs, [fol. 104] gauges, and fixtures out and distributed for their manufacture, and when the orders to stop work came plaintiff had to move all these, as well as the parts from the tools, and endeavor to provide the shop with other work as soon as possible. This rendered useless the scheduling already done and required the rescheduling of work in the shop. The orders to stop work in conjunction with said schedule change caused confusion, congestion, idleness by machine operators and machine tools, and interference with the efficiency of plaintiff's operations, and additional clerical work, the cost of which to plaintiff amounted to $30,000.

15. The actual costs and expenditures and the credits to which defendant is entitled thereon are upon the several contracts as follows:

Supple & Ballin Contract

Actual costs and expenditures (finding 9)		$45,918.73
Credit by Supple & Ballin payment (finding 2)		15,000.00
Balance due at time of cancellation of contract		30,918.73

Standifer Contract

Actual costs and expenditures (finding 10)		223,554.77
Credit by Standifer payment (finding 2)	$73,500.00	
Credit by Fleet Corporation payments (finding 10)	78,220.00	
		151,720.00
Balance due at time of cancellation of contract		71,834.77

Turbine Equipment-Luckenbach Contract

Actual costs and expenditures (finding 11)	73,008.16
Credit payment by Turbine Equipment Co. (finding 2)	68,559.00
Balance due at time of cancellation of contract	4,449.16

P. D. 1779 Contract

Actual costs and expenditures (finding 12)	9,029.00

16. The value of the contracts involved in the case at the time of their cancellation and the loss sustained by the plaintiff by reason of their cancellation was $8,500.00, which is a part of the just compensation due plaintiff in addition to the balances due on said contracts, as shown in finding 15, and the expense incurred by plaintiff by reason of disarrangement of its work, as specified in finding 14.

Conclusion of Law

Upon the foregoing special findings of fact, which are made part of the judgment herein, the court decides, as a conclusion of law, that the plaintiff is entitled to recover the sum of $84,074.34, with interest at the rate of six per cent per annum from August 17, 1920, until paid; and also $8,500.00, with interest at the rate of six per cent per annum from March 17, 1919, until paid.

It is therefore ordered and adjudged that plaintiff recover of and from the United States the sum of eighty-four thousand seventy-four dollars and thirty-four cents ($84,074.34), with interest at the rate of six per cent per annum from August 17, 1920, until paid; and also eight [fol. 105] thousand five hundred dollars ($8,500.00), with interest at the rate of six per cent per annum from March 17, 1919, until paid.

Opinion

Green, Judge, delivered the opinion of the court:

The plaintiff brings this suit to recover what it alleges to be just compensation for the action of the defendant in can-

celing four contracts which plaintiff held, and directing work thereon to cease.

It appears without dispute from the evidence that in the years 1917 and 1918 the plaintiff, which is a builder of turbine equipment for the propulsion of vessels, had entered into thirteen contracts with various parties for the construction of such equipment. Of these contracts, only three give rise to any controversy involved in the case, namely, those entered into with the following-named parties: G. M. Standifer Construction Corporation, Turbine Equipment Company-Luckenbach and Supple & Ballin. The other contract in dispute was made directly with defendant by plaintiff for the construction of the same kind of equipment. In the early part of the year 1918, and after plaintiff had incurred cost and expenditures on these contracts, the United States Shipping Board Emergency Fleet Corporation served upon plaintiff a notice and order of requisition with reference to each of the three contracts above mentioned as having been made with parties other than the Government, and by letter signed by one of its officials separately advised plaintiff and the several parties with whom these contracts had been made that the several contracts had been requisitioned by the Government, and that the United States would make just compensation for the turbine equipment which the plaintiff was required to complete, and that the Emergency Fleet Corporation assumed the responsibility of these contracts and would make payment to plaintiff; also, in several letters with reference to these contracts, stated both that the Government had requisitioned the contracts, and that it had requisitioned the turbine equipment.

While plaintiff was engaged in providing materials and carrying on the work necessary to complete the contracts hereinabove referred to, including the contract made directly with the Government, the defendant notified plaintiff to stop work thereon, which it accordingly did. Defendant paid plaintiff for such work as had been performed on the contracts, and it was later agreed between the plaintiff and the Fleet Corporation that plaintiff should take over the materials acquired and on hand at its plant for the performance of said contracts at a salvage value specified for

each contract and amounting to a total fo $20,149.88, for which the Fleet Corporation took credit.

In addition to the profits which plaintiff alleges it would have made had it been permitted to carry out the contracts, the plaintiff seeks to recover all actual costs and expenditures incurred in the work up to the time it was stopped by the direction of the Shipping Board, together with the cost of caring for, handling. and storing materials from the time when the work was stopped until the defendant finally directed the disposition thereof, and also for extraordinry expense which plaintiff claims was incurred by reason of [fol. 106] being compelled to stop the work on the contracts. With reference to these claims the defendant, while conceding that plaintiff is entitled to just compensation for damages received by the cancellation of the contracts, insists that plaintiff can in no event recover for prospective profits, that the amount of damages claimed by plaintiff on account of actual expenditures for work and materials and as compensation for handling and storing materials greatly exceeds the amount which can properly be allowed on account of these claims. Defendant also insists that plaintiff is not entitled to anything whatever on its claim for extraordinary expense alleged to have been caused by interference with the orderly procedure of plaintiff's shop work by reason of the cancellation of the contracts.

These defenses constitute the issues in the case and present for decision the following questions:

First, whether plaintiff can, in any event and on any of the contracts, recover for prospective profits, and if so in what amount?

Second, if not entitled to recover prospective profits, whether plaintiff can recover the value of its contracts at the time of cancellation, if they had a value?

Third, what amount should be allowed plaintiff for actual costs and expenditures?

Fourth, what amount should be allowed plaintiff as cost of caring for, handling, and storing materials?

Fifth, whether plaintiff should be allowed anything for extraordinary expense, and if so, in what amount?

Another question which has not been discussed in argument also arises as to whether plaintiff is entitled to interest on the items which make up the amount of its recovery.

Considering the first of these questions, we find that defendant contends that under the act of June 15, 1917, 40 Stat. 182, ch. 29, the Government had the right to cancel all or any part of the work provided for by these contracts whether between the Government and another party or between private parties, where the Government had taken over or requisitioned the contracts, and that it has been so held in Russell Co. v. United States, 261 U. S. 514, 519-521, and that the same rule is laid down in Meyer Scale & Hardware Co. v. United States, 57 C. Cls. 26, and having this right there can be no recovery in the case except for actual costs and expenditures, etc.

It is clear that the Government had the right of cancellation for the act of June 15, 1917, authorized the President, in subdivision (b) thereof—

"(b) To modify, suspend, cancel, or requisition any existing or future contract for the building, production, or purchase of ships or material."

In Russell Co. v. United States, supra, it was held that this provision of the statute applied to all contracts in relation to ships and materials therefor, whether between the Government and another party or between private parties; and in the same case, the court said:

"The contract, we must assume, was entered into with the prospect of its cancellation in view, since the statute was binding and must be read into the contract. The possible loss of profits therefore must be regarded as within [fol. 107] the contemplation of the parties."

The decision in the Russell Co. case, therefore, clearly determines that when such contracts were entered into after the enactment of the statute to which reference has been made, there can be no recovery for prospective profits.

While two of the contracts in question were entered into prior to the time that the statute referred to went into effect, an examination of the decisions of the Supreme Court leads

us to the conclusion that the plaintiff must be denied a recovery for prospective profits on these contracts also. In giving our reasons for this conclusion it becomes necessary to accurately keep in mind the facts in the case at bar in order to properly apply the rules laid down by the Supreme Court.

Counsel for plaintiff contend that it is entitled to just compensation for the acts of the Government, and that under the decisions of the Supreme Court just compensation is the value of the property taken at the time of the taking. It must be conceded that the plaintiff is entitled to just compensation for the acts of the Government, but there was in fact no property taken; instead the contracts were canceled. It is true the Shipping Board notified the plaintiff that the contracts had been requisitioned, but it also notified the plaintiff that the Government had taken over the contracts and would assume the obligations thereof. Afterwards the contracts were canceled, and if plaintiff maintains its action at all it must base it upon this cancellation. This, however, does not deprive it of just compensation, for the same statute that provided for the cancellation of the contracts also provided that——

"Whenever the United States shall cancel * * * any contract, * * * it shall make just compensation therefor,"

but in no case has the Supreme Court held that "just compensation" included prospective profits. On the contrary, in the case of the Russell Co., supra, which was like the case at bar, being one in which the manufacturer was bringing the suit and seeking to recover damages by reason of the cancellation of the contract, the Supreme Court said:

"In fixing just compensation the court must consider the value of the contract at the time of its cancellation, not what it would have produced by way of profits for the car company if it had been fully performed."

The case of the Brooks-Scanlon Corp. v. United States, 265 U. S. 106, is relied upon by plaintiff but it does not support its contention. The plaintiff in that case was allowed the value of its contract but anticipated profits were not allowed. As before stated, the Supreme Court has u[illegible]

formly held that just compensation did not include anticipated profits. In this connection it should be noted that in the Russell Co. case, supra, where the manufacturer was seeking to recover anticipated profits as a part of just compensation, it was said:

"This contention confuses the measure of damages for breach of contract with the rule of just compensation for the lawful taking of property by the power of eminent domain."

We therefore feel constrained to hold that the plaintiff in this case can not be allowed for anticipated profits on any of the contracts, notwithstanding the fact that if it had been permitted to complete them substantial profits would have been realized.

[fol. 108] This brings us to the second question in the case which is whether the plaintiff can recover the value of its contracts at the time of cancellation.

We have already shown by a quotation from the opinion in the Russell Co. case that the Supreme Court has held that "in fixing just compensation the court must consider the value of the contract at the time of its cancellation," and in accordance with that ruling we have determined this value from the evidence. In the Russell Co. case the Supreme Court stated "that no prudent person, desiring to acquire this contract, would have paid for it the full amount which could be realized upon completion." In the case at bar no outside person would have paid anything for the contracts for the reasons stated in the findings (see finding 13), but the fact that owing to the peculiar circumstances of this case no one would have desired to purchase them does not show that they had no value to plaintiff, nor does it show that plaintiff has suffered no loss by reason of the cancellation thereof which would be included in just compensation. On the contrary, the evidence clearly shows that the contracts had a value to plaintiff and that it suffered a loss by reason of the cancellation thereof outside of the profits which it anticipated. We think also that the court may determine the amount of this item from all of the facts and circumstances in the case which bear thereon, as shown by the evidence, and have fixed the amount thereof in the findings at $8,500.00. In the opinion of this court rendered in the Russell Co. case, 57 C. Cls. 464, 491, this is

denominated a "cancellation allowance," but the question of what it should be called is not important. The real point is that we hold that it is a proper item to be included in just compensation.

The next question to be determined is what amount should be allowed plaintiff as the cost of caring for, handling, and storing materials.

As before stated, the defendant insists that the amounts claimed by plaintiff for actual costs and expenditures incurred in the work which had been done on the contracts before cancellation, and for taking care of, storing, and handling materials which it was compelled to take care of until defendant finally directed their disposition, are excessive. Counsel for defendant also claim that the amount allowed on these items by the commissioner, which is much less than that claimed by plaintiff, is also excessive, but after going over the evidence we think the amount allowed by the commissioner is substantially correct and have adopted it in the findings of fact.

On the next question as to whether the plaintiff is entitled to anything for extraordinary expense caused by the cancellation of the contracts the evidence shows clearly that the plaintiff is entitled to recover on this item and the only difficulty in connection with it arises with reference to the amount.

The plaintiff claims $100,000 damages by reason of the stopping of work on the contracts, causing what is called extraordinary expense, including additional clerical hire, additional manufacturing cost, and interference with the efficiency of plaintiff's plant operation. Counsel for defendant insist that it is entitled to nothing on this item. The commissioner allowed $30,000. It would serve no useful purpose to review the evidence in support of this item. [fol. 109] Necessarily, as shown by the findings, as to all of the contracts, plaintiff had to withdraw all the drawings, jigs, gauges, and fixtures intended for the work contemplated by the contracts, and it would be some time before the work could be rescheduled, the operatives reassigned to new work, and the books rearranged in conformity therewith. There is no way of estimating the amount which should be allowed exactly, but here again we think the commissioner was substantially correct and have adopted his finding after having gone over the evidence.

As before stated another question arises, not specially argued, as to whether the plaintiff is entitled to interest on the several items of its recovery. If the instant case had been one in which the amount of plaintiff's recovery was to be determined by a contract, we think it clear that no interest could be allowed; but we think it is not a case upon a contract but one in which the amount of plaintiff's recovery is determined by a special statute which provides that it shall receive just compensation. In the opinion on the Russell Co. case handed down by this court (57 C. Cls. 464), this court said that the case under consideration was not one on a contract but under a special statute and interest was awarded. This decision was subsequently affirmed on review by the Supreme Court (261 U. S. 514), and was followed by the Court of Claims in a number of cases, upon some of which certiorari was denied.

The question of whether this court can allow interest on claims such as are involved in the case at bar seems to us to be settled by the decisions of the Supreme Court. In the case of Brooks-Scanlon Corp. v. United States, supra, the Supreme Court, reviewing the decision of this court, said (p. 123):

"If the taking precedes the payment of compensation, the owner is entitled to such addition to the value at the time of the taking as will produce the full equivalent of such value paid contemporaneously. Interest at a proper rate is a good measure of the amount to be added. Seaboard Air Line Ry. Co. v. United States, supra; United States v. Benedict, 261 U. S. 294, 298; Brown v. United States, 263 U. S. 78."

It is true in this case we have found that the contracts were canceled and not appropriated but the statute upon which this action is based provided, as we have already shown, that "just compensation" should be awarded. The citation from the Brooks-Scanlon case, supra, shows the doctrine expressed therein was based upon Seaboard Air Line Ry. Co. v. United States, 261 U. S. 299, and other cases, wherein it was held that just compensation included an award of interest from the time that the claim against the Government first accrued. There can be no difference in the principle between the allowance for interest made in the Brooks-Scanlon case and the allowance of interest to

the plaintiff in this case from the time that its respective claims accrued. It is allowed not as interest, but, as stated in the Brooks-Scanlon case and other cases, as a good measure of the amount to be added for the delay in payment; otherwise the plaintiff would not receive just compensation.

Following the rule above stated, we hold that just compensation entitles the plaintiff to interest at the rate of six per cent upon the amount of its actual expenditures less payments upon the several contracts. This interest should [fol. 110] be calculated thereon from an equated date determined by considering the amount due on the several contracts and the date when each was canceled, and we find this equated date to be March 17, 1919. In this connection it should be stated that the defendant's attorneys practically concede that the plaintiff is entitled to an allowance of this kind, which, in the brief on behalf of defendant, is fixed at ten per cent of the amount of actual outlay and expenditures on the part of the plaintiff, which, however, are fixed at a less amount than that to which we think the plaintiff is entitled. This court in the Russell Co. case, supra, added the amount of the "cancellation allowance" to the amount of the other items of damages which the court found the plaintiff had sustained, and the total thereby obtained was held to constitute "just compensation." In this case we are obliged to keep this cancellation allowance, as we have called it for want of a better term, separate, as it will draw interest from a different date, but we arrive at the total amount of just compensation in the same manner as this court did in the Russell Co. case.

The plaintiff is also entitled to interest on the amount of its other items of recovery and the method which we have used in calculating the amount of interest is as follows:

Interest will be computed on the balance of the amount expended on each contract separately, from the date of cancellation thereof up to the time when the salvaged materials were received. From the total of the costs and expenditures (less credits) together with the interest computed as aforesaid, the agreed value of the salvaged materials will be deducted. Upon the amount remaining interest will be computed up to the time of payment of the award. To this balance due on costs and expenditures, together with inter-

est, will be added the amounts allowed for extraordinary expense and cost of handling and storing materials. From the total thus obtained the amount paid on the award will be deducted to obtain the balance due at the time of payment of the award. The plaintiff is entitled to recover this balance, namely, $84,074.34, with interest thereon at the rate of six per cent per annum from date of the payment of the award until paid, together with a "cancellation allowance" of $8,500.00, with interest at the rate of six per cent per annum from March 17, 1919, until paid. Judgment will be rendered accordingly.

Williams, Judge, Littleton, Judge, and Booth, Chief Justice, concur.

[fol. 111] VII. JUDGMENT

At a Court of Claims held in the City of Washington on the 3rd day of November, A. D. 1930, judgment was ordered to be entered as follows:

It is ordered and adjudged that the plaintiff recover of and from the United States the sum of Eighty-four thousand seventy-four dollars and thirty-four cents ($84,074.34), with interest at the rate of six per cent per annum from August 17, 1920, until paid; and also eight thousand five hundred dollars ($8,500), with interest at the rate of six per cent per annum from March 17, 1919, until paid.

[fol. 112] VIII. OPINION OF THE COURT BY GREEN, J., ON PLAINTIFF'S MOTION FOR NEW TRIAL—Filed November 3, 1930

GREEN, Judge, delivered the opinion of the court:

Plaintiff's motion for new trial is based in part upon an erroneous statement. The court did not hold in the original opinion that plaintiff's property and contract rights were requisitioned. On the contrary, no such language is found in the opinion. The original opinion did state that the Shipping Board notified the plaintiff that the contracts had been requisitioned, but the other language contained in the

notice, and other facts and circumstances which were set out at considerable length in the opinion showed exactly what was done in the transactions between the Government and the plaintiff, and made it evident in the opinion of the court that "there was in fact no property taken." If the defendant had requisitioned and taken over the contracts of the plaintiff, it would have put itself in the place of plaintiff with reference to these contracts and been obliged to manufacture the machinery for the purchasers in accordance with the terms of the contracts. This is just what the defendant did not do. The contracts of the purchasers were requisitioned, and the defendant put itself in the place of the parties who made the contracts with the plaintiff. All this was not only stated in the notices given plaintiff by defendant, but plaintiff accepted this construction and so treated defendant throughout all the transactions had between them.

The motion for new trial also involves a fundamental error as to what was involved in the case. The matter upon which the case turns is not whether some technical or intangible right of plainfiff was requisitioned. In the opinion of the court, as stated in the former opinion, plaintiff's right to recover in the case must be determined under the act of June 15, 1917, providing that the Government had the right to cancel all or any part of such contracts as are involved herein, and its right to recover must be limited by the rule laid down in Russell Motor Car Co. v. United States, 261 U. S. 514. Counsel for plaintiff call attention to the fact that in the Russell Motor Car Co. case the contract in question was made after the enactment of the 1917 statute re-
[fol. 113] ferred to above. This is true, but in the case of Brooks-Scanlon Corp. v. United States, 265 U. S. 106, the contract was made prior to the time of the enactment of this statute, but the acts upon which the plaintiff's claim is based were done under this statute, as they were in the instant case. The facts in that case differed somewhat from those in the case at bar in that the plaintiff in the Brooks-Scanlon case was the purchaser of the product to be manufactured, and in the case at bar the plaintiff is the manufacturer. By reason of this fact there was a dissenting opinion, but in neither the majority nor minority opinion was any question raised as to the application of the

act of June 15, 1917. In fact the act by its express terms authorized the President "to modify, suspend, cancel, or requisition *any existing* or future contract * * *," (italics ours) and by its language and under the holding of the Supreme Court applied equally to contracts made before its passage as well as to those made afterwards while the act was in force—at least where the contracts were entered into when the Government was engaged in a war. As to the constitutionality of that portion of the act which made it apply to existing contracts, we have no doubt. No one would contend that the Government could not, under the stress of war, deprive a citizen of his most valuable right—his liberty—press him into its service, expose him to hardship, danger, suffering, and even death, and yet pay for these acts only what it provided in its laws. If it can do this, it surely can authorize the cancellation of a contract entered into in time of war even though it be made between two citizens prior to the passage of the act authorizing its cancellation and may provide that the parties to such contract shall receive only just compensation for this action. As to what items shall enter into this "just compensation," we are bound by the decisions of the Supreme Court in the Russell Motor Car Co. case, supra, and the Brooks-Scanlon case, supra, both of which hold that prospective profits constitute no part of "just compensation" in such cases. It should also be noted that in the two cases last cited, the Supreme Court appeared to assume that there could be no question but that the act of 1917, above referred to, was constitutional as to contracts made in time of war whether made before or after the passage of the act.

The case of Burns et al., Receivers, v. United States, 66 C. Cls. 142, 146, is cited as being directly in conflict with the decision of the court in the case at bar. This is an error. There is no conflict between the two decisions, and the decision cited has no application to the instant case. In the instant case, the contracts were made in war time and controlled by a statute enacted in war time by virtue of which the Government exercised its war powers; in the Burns case, the contract was made in peace time, all the transactions involved occurred in peace time, and after the war statute which controls the case at bar had been repealed. It was an ordinary case for a breach of contract,

governed by the legal principles that prevail in time of peace.

Having determined that the right of plaintiff to recover was controlled by the act of 1917 above referred to, the court in the former opinion turned to the case of Russell Motor Car Co., supra, to ascertain the rule or rules for fixing the amount of plaintiff's recovery. There is no claim made in argument that the case last cited was not followed [fol. 114] by the court in this respect, but it is contended that the decision therein is not controlling. It seems to be thought by plaintiff's attorneys that there was something in the decision indicating as they state that "the court did not think" that the Government had any power to modify a contract between private parties, even in time of war, but the language of the opinion is clearly to the contrary. It was specially contended by plaintiff in the Russell Motor Car Co. case that the statute did not apply to contracts between the Government and private parties, and the court said:

"We do not mean to deny the power of Congress, in time of war, to authorize the President to modify private contracts (leaving the parties free, as between themselves, to accept or not), nor do we suggest that Congress has not done so by the present statute."

The court goes on to say that it does not concede that the power in question is limited to private contracts. The quotation shows that this contention on the part of the plaintiff is without merit. The other objection to the application of the doctrines laid down in the Russell Motor Car Co. case, namely, that two of the contracts were made prior to the enactment of the statute of 1917, we have already shown not to be well founded.

Counsel for plaintiff assert that Finding 15 is based on a miscalculation which made the costs and expenses to be allowed on the Standifer contract $31,617.97 less than they should be. There is no miscalculation involved in Finding 15. The calculation made by plaintiff's counsel is based on the theory that the Standifer contract could be separated into contracts for the specific articles provided for therein, but the Standifer contract was indivisible. Plaintiff's coun-

sel make their calculation under a theory by which the payments made on the Standifer contract are held to be payments for the articles completed. This is a mistake. The contract specified one price for all the machinery to be constructed under it. Both the turbines and the pumps were constructed under the contract and included in it, and the payments were made on the contract. With reference to payments, the contract provided—

"Ten per cent of contract price with signed contract; seventy per cent. when shipped; ten per cent thirty days after shipment; ten per cent sixty days after shipment."

It will be observed that ten per cent on the whole contract price on all the machinery contracted for was paid in advance. The amount of this payment was $73,500 as shown by Finding 2. When two pumps were completed under the contract, the Fleet Corporation paid plaintiff $1,700. When a geared marine turbine was completed thereunder, $64,620 was paid in three installments; and when fourteen more pumps were delivered, defendant paid plaintiff $11,900. It may be that defendant paid a greater amount or earlier than was required by the contract, but this did not make these items payments for specific machinery. They were payments on the contract made when the machinery was delivered, and not payments for profits as plaintiff contends. There can be no question but that if the contract had been completed these payments must have been credited on the entire purchase price.

The second paragraph of Finding 10, however, may be somewhat ambiguous in the language used with reference [fol. 115] to these payments and to avoid all controversy on this point this paragraph will be stricken out and a paragraph in accordance with the allegations of the petition and the proof will be inserted as follows:

"As alleged in the petition, plaintiff completed and delivered to defendant certain of said turbine equipment under the said Standifer contract, and was paid therefor the sum of $78,220 'in accordance with said Standifer contract'. This sum was paid in the following manner: The Fleet Corporation paid plaintiff $1,700 on account of two pumps having been completed and delivered to it by plain-

tiff on the Standifer contract; also paid plaintiff, in three installments, $64,620 on account of a geared marine turbine having been completed and delivered under the Standifer contract; and $11,900 on account of fourteen other pumps having been completed and delivered under the Standifer contract."

In the former opinion the court held, following the Russell Motor Car Co. case, that:

"In fixing just compensation the court must consider the value of the contract at the time of its cancellation, * * *."

Accordingly, in Finding 16, this value was fixed at $8,500. Counsel for plaintiff complain of this figure as insignificant and erroneous, and endeavor to demonstrate this by including under it other matters than that to which the court applied it. In the former opinion the court stated that in fixing this amount prospective profits were not included. Necessarily, outside of such profits, the value of the contracts to plaintiff was quite small and we have no occasion to change our former finding.

The plaintiff has also filed a motion for Special Findings of Fact under Rule 57. There are many reasons why this motion should not be granted. In the first place plaintiff asked for findings of fact when the case was submitted to the commissioner, and in its brief on the submission of the case to the court stated that the commissioner's findings were in accord with the evidence and, that with change in the amounts in Findings XXXVII and XL and allowance of interest to date of payment, should be adopted by the court. Rule 57 only applies when special findings of fact are not "requested at the time the case is submitted". Plaintiff had already made this request; its findings had been considered and were as to the greater part thereof adopted by the court in the Special Findings of Fact which accompanied the opinion. As the court still retains the same view as to what the findings of fact should be, any further findings of fact (except as to two matters hereinafter stated) would simply be a repetition of those already found and stated. That no purpose would be subserved by such action is apparent.

Many findings asked by plaintiff were omitted by the court but the reason ought to be plain. It is that such findings largely consist of conclusions of law sometimes mingled with matter which in the judgment of the court was entirely irrelevant or immaterial to the case. An examination of the findings requested by plaintiff will show that the principal thing sought is that the court should state in the findings legal conclusions not only that the plaintiff has a claim for just compensation, but the manner in which this computation shall be determined and the amount thereof. The commissioner made such a finding, and stated therein that just compensation included the amount of profits which [fol. 116] the plaintiff would have made on the contracts, which he computed accordingly. But the determination of whether such profits were a part of just compensation in the case at bar is clearly a conclusion of law and has no place in the findings of fact. The court found the amount of such profits, which it included in the Special Findings of Fact, but its conclusion of law that such profits should be excluded from the amount of plaintiff's recovery was expressed in the opinion and judgment, which is manifestly where it belongs. This was not the only conclusion of law which plaintiff seeks to have incorporated in the Special Findings of Fact, but it would take too much space to recapitulate the others.

In one respect, plaintiff's motion for Special Findings of Fact will be granted. It is asked that the dates when the contracts were entered into be shown and as these dates are indirectly referred to in the opinion, this request seems to be proper. Accordingly, Finding 2 will be amended by the addition of the following:

"A copy of the Standifer contract is attached to the petition and marked 'Exhibit B-1'; copies of the Turbine Equipment-Luckenbach contracts are attached to the petition and marked 'Exhibit C-1' and 'Exhibit C-3'; and a copy of the Supple & Ballin contract is attached to the petition and marked 'Exhibit A-1.' These contracts are made part of this finding by reference to said exhibits."

Also, on the court's own motion, the order amending the findings will include an amendment to Finding 10 in manner and form as has been hereinbefore stated.

Plaintiff, having before submission of the case, requested Special Findings of Fact and on the submission presented the same to the court for determination, and the court having made Special Findings of Fact as a basis for its opinion and judgment, the motion for Special Findings of Fact will be overruled except in so far as to amend the Special Findings of Fact heretofore made with respect to the matters specified above, and the motion for new trial will also be overruled. An order will be entered accordingly.

Williams, Judge; Littleton, Judge; and Booth, Chief Justice, concur.

Whaley, Judge, did not hear this case originally and took no part in this decision.

[fol. 117] Clerk's certificate to foregoing transcript omitted in printing.

Endorsed on cover: File No. 35,607. Court of Claims. Term No. 685. De Laval Steam Turbine Company, petitioner, vs. The United States. Petition for a writ of certiorari and exhibit thereto. Filed January 29, 1931. File No. 35,607.

SUPREME COURT OF THE UNITED STATES

ORDER ALLOWING CERTIORARI—Filed April 20, 1931

The petition herein for a writ of certiorari to the Court of Claims is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.